DOCUMENT RESUME

ED 026 304 56 SP 002 153

By-Twelker, Paul A.; And Others
Successive Vs. Simultaneous Attainment of Instructional Objectives in Classroom Simulation.
Oregon State System of Higher Education, Monmouth. Teaching Research Div.
Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.
Bureau No-BR-5-0774
Pub Date Dec 68
Grant-OEG-7-47-9015-283
Note-206p.
EDRS Price MF-$1.00 HC-$10.40
Descriptors-*Educational Experiments, Educational Objectives, Films, *Instructional Design, Instructional Materials, Intelligence Factors, Personality, Problem Solving, *Simulation, *Teacher Education, Training Laboratories, *Training Techniques
Identifiers-Classroom Management Observational Syste, Ryan's Classroom Observational Record

An experiment was conducted to determine which of three modes of instruction controlling the "density" of simulation training was most effective in terms of transfer and most efficient in terms of the learning rate of preservice teachers. Four goals of the classroom simulation were identified and practiced in three training modes: (1) four at a time, the simultaneous mode; (2) two separately and two together, the combination mode; (3) one at a time, the successive mode. The subjects, undergraduate students in elementary education at Oregon College of Education and University of Oregon in 1965-66 and 1966-67, were randomly assigned to the three treatments, and data was obtained from simulation pre-, post-, and retention tests and from two classroom evaluations of subsequent student teaching behavior. The conclusion after analyses of variance was that the simultaneous method was more efficient. Data revealed no significant interaction of cognitive and personality factors with training modes, but this exploratory phase of the research was limited (as was the total effort) by methodological and conceptual problems. (Included are a 22-item bibliography, standards for teacher behavior, a representative sample of instructor scripts of problem episodes, the simulation training instructions, and descriptions of the measurement instruments and procedures.) (JS)

ED026304

BR5-0774
PA-56
OE-BR

Final Report
Project No. 5-0774
Grant No. OE 7-47-9015-283

Successive vs. Simultaneous Attainment of Instructional Objectives in Classroom Simulation

Paul A. Twelker
Teaching Research
A Division of the
Oregon State System of Higher Education
Monmouth, Oregon

Bert Y. Kersh
Oregon College of Education
Monmouth, Oregon

John R. Pyper
Purdue University
Lafayette, Indiana

December, 1968

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

SP002153

U. S. Department of
Health, Education, and Welfare

Office of Education
Bureau of Research

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PREFACE

This report presents an account of a study that examined a rather interesting instructional variable that may be called "density" of instruction, or more specifically, the number of objectives or learning functions that are covered in instruction at any one time. While many methodological problems obscured the results of the present investigation, the study of the density of the instructional experience should not be forsaken. The investigation is especially relevant to the field of instructional simulation, as simulation offers a means of providing opportunities for students to integrate a number of different objectives at one time in a lifelike (simulated) context. These objectives need not be limited to the cognitive domain, but may include affective and psychomotor domains as well. While the present study investigated the density of objectives in the cognitive domain, it is hoped that future research will move into these other areas.

This writer is indebted to many people for their contribution to the project, but especially to Dr. John Pyper who took over as the project director soon after the initiation of the study. His contribution cannot be expressed in words alone, as he was faced with the challenge of carrying on a project originally conceived of by the principle investigators, Dr. Bert Kersh and myself. The task of translating another individual's proposal into a research project, especially a study as complex as this, is not an easy assignment.

Gratitude is also expressed to:

Students and staff at the Oregon College of Education and University of Oregon.

Cooperating teachers and administrators at Monmouth, Dallas and Salem schools.

Mr. John Jones, Mr. Jack Lavenburg, Mr. Gerald Miller, Mr. Wayne Parrish (University of Oregon), Mr. Gerald Girod and Mr. Peter Smith (Oregon College of Education) who were the instructors.

Mr. Fred C. Crowell who wrote the orientation program and contributed a major effort in the development of the Classroom Observation System.

Dr. David G. Ryans for permission to use the Classroom Observation Record developed in conjunction with the Teacher Characteristics Study.

Educational Testing Service for permission to use tests from the Kit of Reference Tests for Cognitive Factors.

Mrs. Pat Modde, Mrs. Sybil Stanbro, Mrs. Mary Walrod, Mr. Tom Haines, Mr. Kevin Morse and Mr. Peter Smith who served as observers in the classroom.

Mr. Timoth J. Pettibone and Mr. Mil Jones who served as laboratory technician for the project.

Dr. Gene Glass who contributed many helpful suggestions regarding the data analysis.

Paul A. Twelker
Director
Simulation Systems Program

SUMMARY

Classroom simulation is a special type of instructional simulation which creates for pre-service teachers a classroom setting in which they can practice responding to classroom problems. A single class of pupils is simulated for the teacher trainees through printed descriptions of a school and community, cumulative record files describing the children, and sound motion pictures showing the children in a great variety of problematic situations (cf., Kersh, 1961, 1963a, 1963b Twelker, 1967).

Media-ascendent simulation represents an innovation in teacher education which needs to be perfected. The "density" of the simulation experience, and the mode of instruction with which pre-service teachers are trained in the simulation facility, are problems that were of concern in the present study. The term "density" refers to the number of learning functions or instructional objectives that are covered in training. For example, considering the simulation experience described above, it is clear that the trainee(s) must identify a problem before making some response. Thus, *problem identification* becomes an objective that is involved in the simulation training. In some cases, it may be assumed that *S* selects a response from a repertoire of responses. This being the case, a possible objective might involve *response flexibility* or the ability to generate alternate moves. In order to assess the appropriateness of any response, *S* might predict many of the implications (consequences) of the alternative moves. This would involve the objective of *consequence prediction*. Or *S* may select or assess a response on the basis of relevant educational principles involved. Most likely, the exact manner in which *S* goes about making the response in the simulated classroom context depends on prior knowledge and stage of training.

The present project identified four important learning functions in classroom simulation training that demanded attention:

(1) Identification of the salient problem cues or elements in the motion picture sequence itself;

(2) Selection of an appropriate response to the projected problem;

(3) Prediction of the implications (consequences) of the selected and rejected possible responses;

(4) Awareness of relevant educational standards involved.

It was assumed that if S could perform appropriately in each of these four areas, his response in a transfer test would be satisfactory. In this light, classroom simulation training involved the student in a learning experience that related directly to each function identified above.

Further it was hypothesized that the attainment of these objectives should also result in the reduction of student disturbances, student inattention, and disciplinary activities by the trainees during their student teaching experiences. Thus the previously listed objectives may be considered mediating objectives. Obviously if trainees are acquiring the skill to "nip problems in the bud" then there should be differences in the general classroom activities between Ss who have received Classroom Simulation and those not receiving it.

In considering the attainment of each of these objectives, an obvious factor to consider is how each of the objectives relate to the other in training. That is, how dense is the instruction? "Density" of instruction could be heightened by requiring S to consider four objectives simultaneously. Density could be lowered by having S attain each objective successively. To make the investigation more meaningful, three training procedures were used to form a continuum of density. The four training objectives were practiced in the following three training modes:

(a) four at a time (the simultaneous mode)

(b) two separately and two together (the combination mode)

(c) one at a time (the successive mode)

The investigation sought to determine: (1) which of these instructional procedures was most efficient (in terms of learning rate); (2) which was most effective (in terms of transfer); and (3) if individual differences in cognitive and personality characteristics interacted with training modes in such a way as to result in differential treatment effects. In specific terms, the questions which the investigation sought to answer were:

1) Which training mode results in the most efficient attainment of the criterion behaviors associated with each of the four learning tasks during training?

2) Which training mode results in the most effective transfer of the criterion behaviors of each of the four major learning objectives in simulated problem episodes parallel to the training episodes? The transfer of these behaviors was evaluated immediately following training and six weeks later with a retention test identical to the post-test.

3) Which training mode results in the most effective transfer of the criterion behaviors to a practicum teaching situation? The presence of these behaviors were evaluated with the use of: (a) a classroom observation technique utilized by special observers, and (b) a teacher rating procedure filled in by the supervising teacher.

4) Are there differential training effects associated with entering cognitive and personality characteristics of the trainees?

Methods

Subjects

The subjects were undergraduate students enrolled in the elementary education programs at the Oregon College of Education (OCE) and the University of Oregon (U of O) during the Winter and Spring quarters of the 1965-1966 academic year and the Fall and Winter quarters of the 1966-1967 academic year.

Instructional Procedures

The training materials used in this study consisted of edited material which was initially developed as part of a research project supported by an USOE Title VII project and identified as "Mr. Land's Sixth Grade" (Kersh, 1963b). The main portion of the original training materials consist of 60 problem seuqences, or critical incidents occurring in Mr. Land's Sixth Grade classroom. For this project the three 20-problem sequences were modified to form two sequences of 16 problems each and two sequences of 10 problems each. The two 16-problem sequences were used for pretesting, immediate post-testing, and delayed post-testing. The two sequences of 10 problems were used as alternative training films. As was the case with the 3 original sequences of 20 problems, each of these four sequences were ordered to follow the sequence of a school day.

Simulation Facility. The research facility, called the "Classroom Simulator," was developed and installed in the Campus Elementary School laboratory of Teaching Research, on the OCE campus. A similar facility was set up at the University of Oregon.

Pretest. A pretest consisting of 16 problem episodes was administered in order to permit random assignment to treatments within pretest score levels. The pretest was administered during a class period about a week before simulation training began.

Once pretest scores were determined, students were ranked from high to low on pretest score, divided into groups of three, and then randomly assigned to training mode. In the event of tied scores, Ss were randomly assigned to a level.

Training. Ss in the successive mode viewed all of the filmed problems one-by-one. They successively identified the cues, saw the same films again and gave several different responses, reviewed the same ten problems to identify consequences, and finally identified the standards for each of the ten problems. Ss in the combination mode identified the cues first, then reviewed the films and gave a variety of responses as well as their respective consequences, and then finally identified the standards. In the simultaneous mode, Ss accomplished all four objectives before going on to the next episode.

Post-test. Within two weeks following the completion of training, and before the end of the quarter, each S was tested individually in the simulation facility. A series of problem episodes were shown similar to the pretest.

Retention Test. The retention test was administered six weeks after the completion of simulation training, during the next quarter. The test consisted of 8 of the 16 episodes used for the pretest.

Classroom Evaluation of Trainees. Evaluations were made of the trainees' teaching during the quarter following Classroom Simulation training. As part of the Junior Block II experience, the students attended an elementary classroom in the college area one morning a week. They usually taught for a period of about 1/2 hour and the rest of the time they observed other student-teachers or the cooperating teacher. This experience could more appropriately be labelled "participation teaching" rather than student teaching.

Two evaluations of teacher trainee behavior were made. One was by trained observers utilizing a classroom management observation system designed specifically for this research. Overall comparisons of the effectiveness of teacher trainees were made by comparing: (1) the amount of disturbance time; (2) amount of management and stimulation time; (3) number of disturbances, and (4) number of management and stimulation behaviors. The other evaluation was by the cooperating classroom teacher using Ryan's Classroom Observational System.

Learner Characteristics Measures

Tests were administered to Ss during class time in order to assess individual differences of cognitive and personality factors. The cognitive factors were assessed utilizing a selected group of tests from the ETS Kit of Cognitive Tests. The Edwards Personal Preference Schedule was used to assess Ss personality differences.

Instructors

All of the instructors held a Master's degree in Education and most had public school teaching experience. The degree of consistency among the instructors' judgments made during pretesting, training, and post-testing were evaluated throughout the project. The evaluation of the reliability of the judgments occurred after training had taken place.

Conclusions

Treatment Differences

The differences among treatments were significant for only three of 39 measures representing training, post-test, retention test, and classroom observation variables. Two of the three measures taken during training were significantly different among treatments, namely instructional time and number of times films were shown. None of the five immediate post-test measures were significantly different. None of the 5 delayed post-test (retention) measures were significantly different. The four measures resulting from the classroom observations indicated no differences. Finally, only one of the 22 ratings made by the cooperating classroom teachers indicated significant differences among treatments. Ss were judged to differ significantly in the amount of aloofness or responsiveness during their teaching. Ss receiving the simultaneous treatment were judged to be less responsive than Ss receiving the other treatments.

The differences between treatment main effects of the number of films shown and instructional time is an expected difference, and due to built-in treatment differences. It would be anticipated that the successive and combination treatments would require extra presentations of the films and extra instructional time because of the interrupted (less dense) nature of the instruction. Thus it is evident that the results indicate that there were differences between treatments in terms of efficiency and that the simultaneous treatment was the most efficient.

The only other signifcant difference between the treatments, the one judgment of the classroom teachers regarding the trainees' confidence, indicates that those Ss receiving simultaneous training were not as confident. In view of the large number of non-significant differences among treatments, there is a strong possibility that this difference was spurious.

The conclusions drawn in answer to the three questions concerning treatment effects are:

1) The simultaneous method was a more efficient method of training.
2) No differential treatment effects were detected in the classroom simulation immediate or delayed post-test.
3) No differential treatment effects were detected in the classroom evaluation measures except for one evaluation by the classroom teachers which indicated that Ss receiving simultaneous training were not as responsive to the students. However, this difference could be spurious.

School and Term Differences

The predominant differences of this research effort were those occurring between schools and terms. One of the three training measures, instructional time, was significantly different between schools and terms. All of the five immediate post-test measures were significantly different between schools and two of the five were also significantly different between terms. The pretest score was also significantly different between schools. Further differences between schools, on the retention and classroom observation measures, could not be determined as, it will be recalled, conditions prevented the collection of this data at U of O. However, of the five retention test measures, two were significantly different between terms at OCE.

Interaction of Cognitive and Personality Factors with Training Modes

It should be noted that this phase of the research was frankly exploratory in nature. The limited number of subjects available for this analysis, and the unclear status of knowledge about the interactions between instructional method and learner characteristics were constraints to be reckoned with. Further, little data were available to the researchers to determine what measures should be taken of learners to assess individual differences. Data revealed that no significant interactions existed.

Methodological and Conceptual Problems

Several problems came to light as this research effort unfolded which could not be adequately overcome for a variety of reasons. They limited the value of this research endeavor and therefore must be taken into consideration in future developmental and research efforts. Problems which prevented an adequate assessment of the questions to which this research was addressed could and did occur in all of the major elements of any research effort which are namely,

1) the nature of the training materials as they are designed to achieve certain objectives,

2) the manifest training procedures,

3) the environment in which the research occurs,

4) the nature of the observations designed to evaluate the attainment of objectives,

5) the manifest evaluational procedures.

Lack of significant differences can be due to inadequacies in any of the above-mentioned areas.

I. PROBLEM

A basic problem in teacher education is how to provide students with pre-service experience that will permit them to master skills in classroom management and communication. Present methods of training pre-service teachers which involve field experience are inadequate to handle the increasing numbers of students in teacher education. Further, there are not enough facilities to provide the type of direct supervision over long periods of time that is characteristic of present methods of teacher education. Classroom simulation, a training procedure pioneered by Kersh (1963b) represents a major advance in educational technology, and has proved to be an effective method of providing pre-service teachers with an experience that bridges the gap between class work and actual student teaching.

Classroom simulation is a special type of instructional simulation which creates for pre-service teachers a classroom setting in which they can practice responding to classroom problems. A single class of pupils is simulated for the teacher trainees through printed descriptions of a school and community, cumulative record files describing the children, and sound motion pictures showing the children in a great variety of problematic situations (cf., Kersh, 1961; 1963a; 1963b; Twelker, 1967). Once a trainee is oriented to the class and the technique, he is presented with a series of filmed problem sequences and requested to enact his response to each. Depending upon the reaction of the trainee, the experimenter selects and projects one of two or three alternative feedback sequences that show a probable class response to the trainee's response. Each problem is repeated until the trainee achieves a pre-determined level of performance. After the presentation of the problem and feedback films, the trainee and the experimenter discuss the episode together. The experimenter usually withholds direct guidance as much as possible, forcing the trainee to rely heavily on the feedback sequence and supporting records in his self-evaluation.

Media-ascendent simulation represents an innovation in teacher education which needs to be perfected. A program of research has been undertaken at Teaching Research to investigate several crucial variables systematically. In previous studies, size of image, motion in image, mode of feedback, mode of response, and prompting were investigated (cf. Kersh, 1963a; 1965; Twelker, 1966). The "density" of the simulation experience, and the mode of instruction with which pre-service teachers are trained in the simulation facility, are problems that were of concern in the present study.

The term "density" refers to the number of learning functions or instructional objectives that are covered in training. For example, considering the simulation experience described above, it is clear that the trainee (*S*) must identify a problem before making some response. Thus *problem identification* becomes an objective that is involved in simulation training. In some cases, it may be assumed that *S* selects a response from a repertoire of responses. This being the case, a possible objective might involve *response flexibility* or the ability to generate alternate moves. In order to assess the appropriateness of any response, *S* might predict many of the implications (consequences) of the alternative moves. This would involve the objective of *consequence prediction*. Or *S* may select or assess a response on the basis of relevant educational principles involved. Most likely, the exact manner in which *S* goes about making the response in the simulated classroom context depends on prior knowledge and stage of training.

The present project identified four important learning functions in classroom simulation training that demanded attention:

(1) Identification of the salient problem cues or elements in the motion picture sequence itself;

(2) Selection of an appropriate response to the projected problem;

(3) Prediction of the implications (consequences) of the selected and rejected possible responses;

(4) Awareness of relevant educational standards involved.

It was assumed that if *S* could perform appropriately in each of these four areas, his response in a transfer test would be satisfactory. In this light, classroom simulation training involved the student in a learning experience that related directly to each function identified above. After viewing a filmed problematic episode, *S* was required to:

(1) Identify the salient cues that signalled the problem (discrimination of cues);

(2) Enact a number of alternative responses to the situation, so he could have an opportunity to try out a number of different responses (response flexibility);

(3) Predict accurately the consequences, i.e., subsequent behaviors of pupils, in response to each of the alternative responses (prediction of consequence); and

(4) Identify from a list of standards of teacher behavior those that constituted the most appropriate response for each episode (knowledge of standards).

It was felt that practice of these learning functions would result in:

(1) More rapid identification of crucial cues, thereby enabling the prospective teacher to be more able to "nip problems in the bud";

(2) Awareness of a greater number of potential responses to problem situations;

(3) Increased accuracy of prediction of the consequences of the various alternate responses;

(4) Increased ability to select and enact the most effective response based upon viable standards of teacher behavior.

Further it was hypothesized that the attainment of these objectives should also result in the reduction of student disturbances, student inattention, and disciplinary activities by the trainees during their student teaching experiences. Thus the previously listed objectives may be considered mediating objectives. Obviously if trainees are acquiring the skill to "nip problems in the bud" then there should be differences in the general classroom activities between Ss who have received Classroom Simulation and those not receiving it.

In considering the attainment of each of these objectives, an obvious factor to consider is how each of the objectives relate to the other in training. That is, how dense is the instruction? "Density" of instruction could be heightened by requiring S to consider all four objectives simultaneously. Density could be lowered by having S attain each objective successively. Examples should clarify this point. In a dense learning experience, a teacher trainee might practice responding to problem situations repeatedly until he achieved criterion on each objective. When the trainee achieved criterion on each objective of a problem episode, he would then go on to another problem and the training procedure would be repeated. A "less dense" procedure might consist of requiring S to concentrate on each objective one at a time. That is, S might go through all of the problem situations concentrating on one of the four objectives. When criterion performance on that objective was attained on problems, then S would recycle through the problems again concentrating on the next of the remaining objectives. Training would continue in this manner until S had achieved criterion on all tasks. The latter (less dense) procedure has been labeled "successive" training and the former (more dense) procedure has been labeled "simultaneous" training. To make the investigation more meaningful, three training procedures were used to form a continuum of density. The four training objectives were practiced in the following three training modes:

(a) four at a time (the simultaneous mode)

(b) two separately and two together (the combination mode)

(c) one at a time (the successive mode)

Three sources of evidence strongly suggest that the density of the learning tasks during simulation training could influence significantly the amount of learning that derives from it. First, subjective observations made during earlier research of the Classroom Simulation training indicated that some students appeared to be awed and indeed overwhelmed by the (dense) learning task. A less dense mode of instruction could alleviate this. Dealing with each objective successively might simplify the learning task for S by enabling him to concentrate on one component of his behavior at a time. However, the effect of successive training on post-test performance involving integration of some components of learning is not known. In the successive mode, S would be instructed to practice "component skills" as contrasted with attempts to make an "integrated" total response to each problem. Further, it is unknown whether a learner may effectively practice more than one component of behavior at once and still progress as rapidly towards an instructional objective as he might were he to attend to each separately.

Second, the possibility that "crowding together" too many instructional objectives in a single learning experience may have an inhibiting effect has been identified as a problem by Kersh (1964). Two programs of instruction were prepared for that experiment. The program that attempted a limited number of objectives during the first portion of instruction produced superior performance in terms of learning rate and transfer than the program that attempted to teach more objectives. It was reasoned that if the number of objectives taught by the poorer program had been "spread out," the effectiveness of the program would have been increased.

Third, in summarizing the evidence on part vs. whole methods of instruction, Naylor (1962) concludes that for skills which are not difficult and which are not highly organized, the use of the part method to practice those parts in which the student is weakest is the most efficient procedure. Since the classroom management skills taught in Classroom Simulation involve a wide range of phenomena and are not tightly organized nor redundant it would seem that the part method would be more productive.

Objectives

Within the limitations of existing classroom simulation materials, the objective was to determine the differential training effects of three instructional simulation modes identified as "successive," "combination" and "simultaneous." For purposes of the present experiment, S was required to manifest competencies in regard to the following objectives:

(1) Discrimination of Cues (Dc) - the identification of salient cues or elements in the motion picture sequence that define a particular problem;

(2) Response Flexibility (Rf) - the generation of alternative responses to the projected problems;

(3) Response Consequence (Rc) - the identification of the consequences of the alternative responses ("What-would-be-most-likely-to-happen-if. . . . .");

(4) Knowledge of Standards (KOS) - the identification of educational standards involved ("What-to-do-when").

The investigation sought to determine: (1) which of these instructional procedures was most efficient (in terms of learning rate); (2) which was most effective (in terms of transfer); and (3) if individual differences in cognitive and personality characteristics interacted with training modes in such a way as to result in differential treatment effects.

Due to inadequate research, and minimal theoretical structure, directional predictions were not formulated. Thus the purpose of this exploratory investigation was to gather data that would serve to build up a base from which theory might emerge. In specific terms, the questions which the investigation sought to answer were:

(1) Which training mode results in the most efficient attainment of the criterion behaviors associated with each of the four learning tasks during training?

(2) Which training mode results in the most effective transfer of the criterion behaviors of each of the four major learning objectives in simulated problem episodes parallel to the training episodes? The transfer of these behaviors was evaluated immediately following training and six weeks later with a retention test identical to the post-test.

(3) Which training mode results in the most effective transfer of the criterion behaviors to a practicum teaching situation? The presence of these behaviors were evaluated with the use of (a) a classroom observation technique utilized by special observers, and (b) a teacher rating procedure filled in by the supervising teacher.

(4) Are there differential training effects associated with entering cognitive and personality characteristics of the trainees?

In regard to this latter point, it is recognized that one requisite of an ideal instructional system is that the instructional strategies match well the various characteristics of the learner such as his aptitude, abilities, interests, and learning style. Most instruction has little opportunity to take into account individual differences of learners. Yet, when economically and practically feasible, it is advantageous to prepare several different programs that have a proven optimal effect with different types of learners. The present study sought to examine the interaction of three instructional methods with learner characteristics to see if effectiveness might be increased if instructional methods were designed to accommodate identifiable learner differences. Tallmadge and Shearer (1967), and Tallmadge, et al. (1968), in their review of literature relevant to this problem, point out that the evidence to date does not lend itself to the formulation of any unified theory regarding interactions between instructional method and learner characteristics. Many results are conflicting, others are ambiguous. The reader is directed to their reports for a detailed review of the literature.

II. METHODS

Subjects

The subjects were undergraduate students enrolled in the elementary education programs at the Oregon College of Education (OCE) and the University of Oregon (U of O) during the Winter and Spring quarters of the 1965-1966 academic year and the Fall and Winter quarters of the 1966-1967 academic year. Table 1 summarizes the number of Ss who completed training. During the first quarter of training it became evident that the training procedures had to be modified. Therefore, data from Ss who received training Winter quarter 1966 could not be included in the final analysis. Also 16 Ss who received training during the Winter quarter of 1967 at the U of O were dropped due to the abrupt termination of an instructor.

	Academic Quarters				
	1965-1966		1966-1967		
INSTITUTION	Winter	Spring	Fall	Winter	Total
OCE	30	26	21	25	102
U of O	21	28	17	8	74

Table 1. Total number of Ss receiving simulation training before deletion.

The Ss trained at OCE were first quarter juniors enrolled in the Junior Block I portion of the Elementary Teacher Education program. Participation in the Classroom Simulation training was considered by the Junior Block instructors to be an integral part of the course of instruction and a valuable experience. Therefore, experimental participation was the rule for all except for those who were over 25 years of age or who had extensive teaching experience. Although participation was required, performance was not graded.

The above description is also essentially true for that which occurred at the U of O except for the following:

1. Not all Ss received training. Due to the reduced number of instructors and larger enrollments, only one of the two or three sections of the Junior Block course received training. When there were too many Ss in even one section, the excess Ss were assigned to a group training procedure which was outside of the experimental design.
2. The Classroom Simulation training was incorporated into the curriculum as adjunct instruction and was not nearly as integral a part of the instructional program as at OCE.

Instructional Procedures

Training Materials. The training materials used in this study consisted of edited material which was initially developed as part of a research project supported by an USOE Title VII project and identified as "Mr. Land's Sixth Grade" (Kersh, 1963b). The main portion of the original training materials consist of 60 problem sequences, or critical incidents occurring in Mr. Land's Sixth Grade classroom. The 60 problems are divided into three sets of twenty sequences each, corresponding to a school day and are roughly parallel in terms of the types of problems included. One half of the filmed sequences pose problems in classroom management for the student teacher, and the remaining are classed as communication problems (inattention, interjection of new information by a student, etc.).

As the critical incidents were enacted and filmed, the pupils were instructed to interact with the camera as if it were the student teacher. Upon replay, therefore, it is quite natural to instruct the prospective student teacher to react to the film as if she were in a live classroom. To further enhance the simulated practicum from the instructional standpoint, feedback sequences are available for each of the 60 problem sequences. The feedback sequences show the teacher trainee how the youngsters might react to his handling of each of the problematic situations. There are at least two filmed alternative feedback sequences available for each of the 60 problem sequences. By using three remotely controlled projectors, the motion picture projection of the children may be changed from the problem sequence to the feedback sequence instantly.

Crucial standards of student-teacher behavior relevant in one or more of the problem episodes were identified by a jury of master teachers (cf., Kersh, 1963b, p. 28-31). The standards relevant for a given problem episode were identified and used by the instructors during training to guide their decision of the effectiveness and adequacy of the teacher trainee's response. The number of standards and those identified as relevant in the various episodes followed the revisions reported elsewhere (Twelker, 1966). See Appendix A for the list of principles and Appendix B for a representative sample of problem episode "scripts" used by instructors.

For orientation purposes, a complete cumulative record file is provided on each child. Included are standardized test data, achievement records, health records, a summary of the teacher's anecdotal records and a snapshot. In addition, there are printed descriptions of the hypothetical school, "College Grove Elementary," and the community of "College Grove." Further orientation is provided through the use of motion picture and slide-tape sequences presenting the class under the direction of Mr. Land as they might appear during an observation session.

For this project the three 20-problem sequences were modified to form two sequences of 16 problems each and two sequences of 10 problems each. The two 16-problem sequences were used for pre-, testing, immediate post-testing, and delayed post-testing. The two sequences of 10 problems were used as alternative training films. As was the case with the 3 original sequences of 20-problems, each of these four sequences were ordered to follow the sequence of a school day.

Simulation Facility. The research facility, called the "Classroom Simulator," was developed and installed in the Campus Elementary School laboratory of Teaching Research, on the OCE campus. A similar facility was set up at the University of Oregon. A detailed functional description of the Classroom Simulator can be found in an earlier report (Kersh, 1963b).

The facility is diagrammed in Figure 1. Briefly, S stands in a position relatively close to a large, central, rear projection screen. The large screen allows a life-size visual image to be projected. Appropriate stage props (desk, books, etc.) are used to further enhance the illusion of reality. The instructor sits nearby controlling the projection of problems and feedbacks on the three projectors with the aid of a fully automatic console.

Orientation. During the first week of each term one hour of class time was devoted to an introduction of Classroom Simulation training. First, Ss were given a general overview and introduction. This orientation, which lasted approximately 15 minutes, covered the history and development of the technique, introduction of the instructors, the location of the laboratory, and other pertinent information. Ss were told that everyone would receive a meaningful training experience, although the training may differ from student to student because an experiment was being conducted as the materials were still in the process of development.

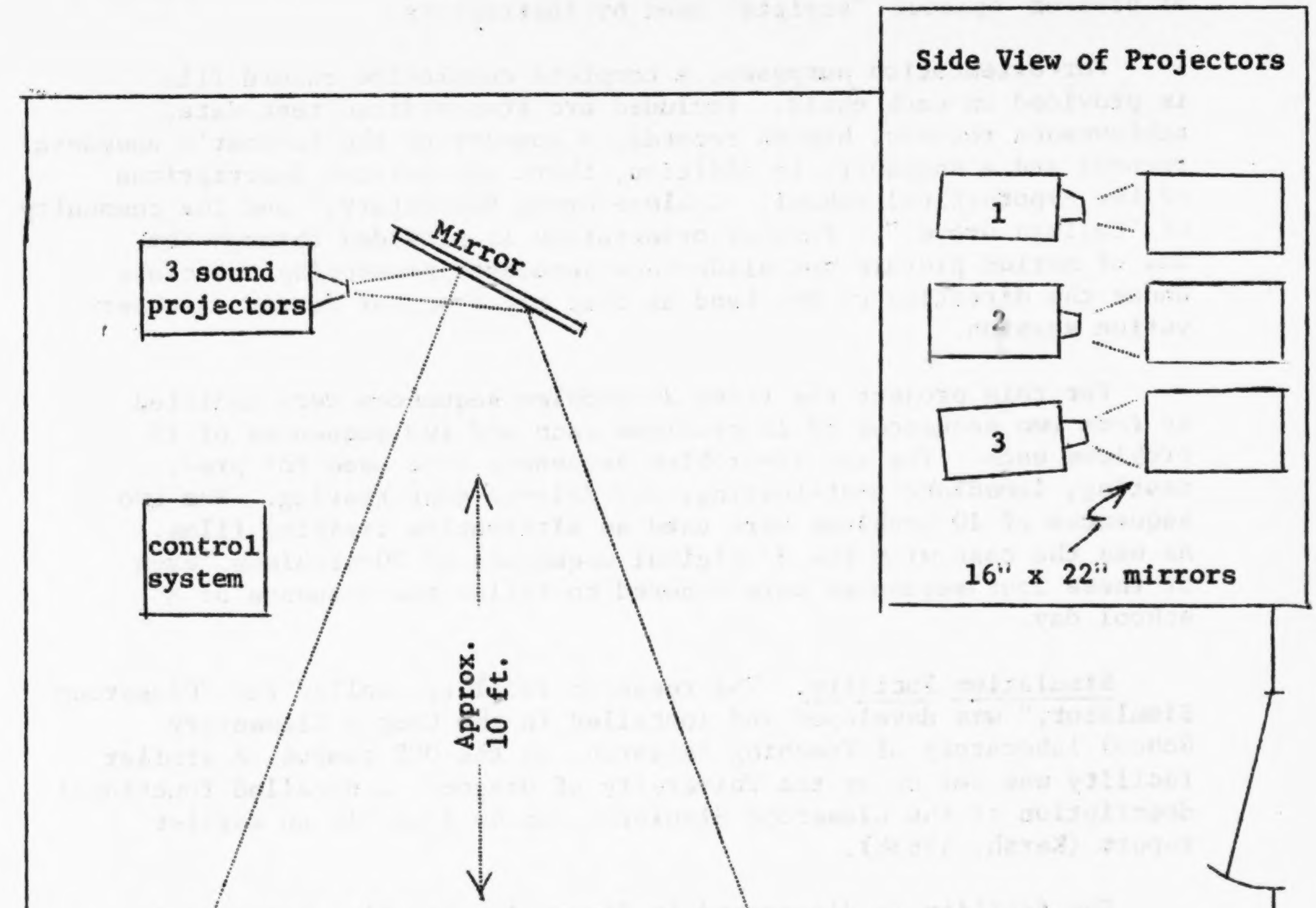

Side View of Projectors
1
2
3
16" x 22" mirrors
Mirror
3 sound projectors
control system
Approx. 10 ft.
Rear Projection Screen (6' x 8')
Built into wall
Remote Controls
Student teacher
Desk
Experimenter
Windows
Approx. 10 ft.
Approx. 14 ft.
Chalkboard
Laboratory Entrance

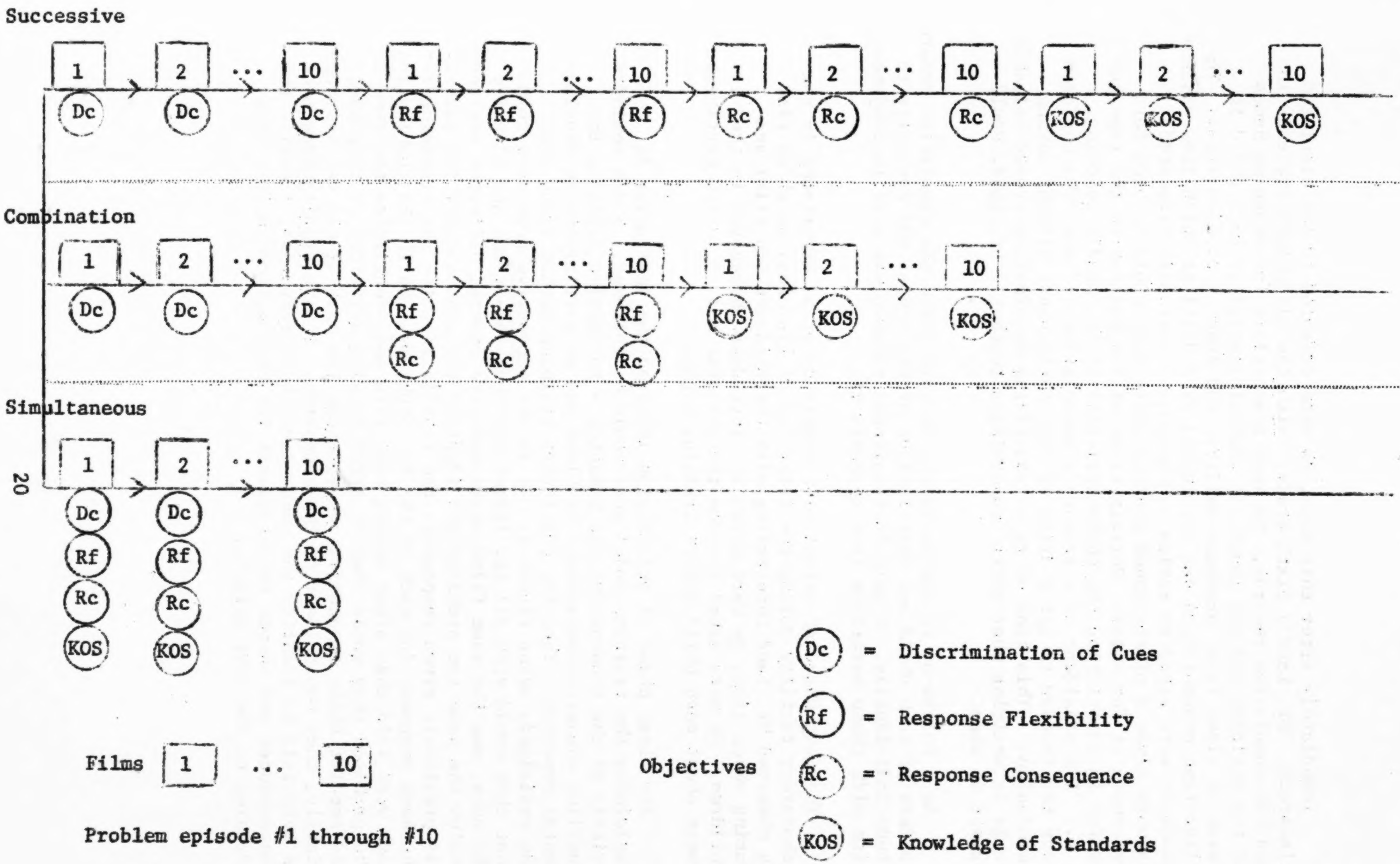
Figure 1. Simulation Facility located at Oregon College of Education. 1965 Configuration.

Immediately after this talk, Ss were oriented to the simulated classroom, "Mr. Land's Sixth Grade," with the slide-tape presentation and the cumulative records. Ss were responsible for learning names of the children and the important characteristics of each child in terms of class role, academic ability, and special problem areas. The slide-tape presentation was terminated by a drill at which time various students were asked to review information previously presented. Ss were given a mimeographed seating chart that could be used for reference or for notes. Certain kinds of information on the tape was useful in identifying the characteristics of Mr. Land's teaching, i.e., "I'm president of a teacher's association..." and "The children have the freedom to get a drink or wash their hands without asking permission." This kind of role-identifying information proved valuable to Ss in deciding what their "supervising teacher," Mr. Land, would expect of them.

As a follow-up to the activity, Ss were given the cumulative record folders of each child and descriptions of the school and community to study individually. A self-instructional program was used in conjunction with these materials (see Appendix E).

The next phase of orientation consisted of an experience in the laboratory facility during the first day of training, at which time Ss observed Mr. Land interacting with the children (on film) and during which time, Ss were asked to "introduce themselves to the children. Ss were asked to name the children and to review pertinent facts about each child before training began.

The final phase of orientation involved the instructor in explaining the training model that would be followed. S was reminded briefly of the reasons for his presence - to receive training in handling classroom management problems and to participate in developmental research. Then the particular training method to be used was explained, using Figure 2. Ss in the successive mode were told that they would view all the filmed problems one-by-one and identify the cues, see the same films again and give several different responses, review the same ten problems and identify the consequences for each of his previously given responses, and finally identify the standards for the best response for each of the ten problems. Ss in the combination mode were told that after seeing each film and identifying the cues in the problems they would then be asked to give a variety of responses and predict their respective consequences for each of the ten episodes. Finally, they would identify the standards. In the simultaneous mode Ss were told to identify the cues, give their responses, identify the consequences and choose the standards for each episode before progressing to the next episode.


Successive
1
2
...
10
1
2
...
10
1
2
...
10
1
2
...
10
Dc
Dc
Dc
Rf
Rf
Rf
Rc
Rc
Rc
KOS
KOS
KOS
Combination
1
2
...
10
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...
10
Dc
Dc
Dc
Rf
Rc
Rf
Rc
Rf
Rc
KOS
KOS
KOS
Simultaneous
1
2
...
10
Dc
Rf
Rc
KOS
Dc
Rf
Rc
KOS
Dc
Rf
Rc
KOS
Films
1
...
10
Problem episode #1 through #10
Objectives
Dc = Discrimination of Cues
Rf = Response Flexibility
Rc = Response Consequence
KOS = Knowledge of Standards

Figure 2. Schema of training methods.

Pretest. A pretest consisting of 16 problem episodes was administered in order to permit random assignment to treatments within pretest score levels. The pretest was administered during a class period about a week before simulation training began. Ss were told that they would see 16 problems occurring in Mr. Land's simulated classroom. Background information was provided for each episode. As soon as each episode was shown, Ss answered five questions:

1. What would you say as a response to the episode?
2. How would you say the response (e.g., angrily, confidently, confidentially)?
3. When would you make the response, i.e., at what point in the film would you respond to the stimulus, (e.g., "when Dan stood up," "when Brian threw the paper.")
4. From where in the classroom would you respond, (e.g., "near Ron," "by the door.")
5. What was the problem?

Ss were told to make their responses as if they were playing the role of a student teacher. They were asked to respond as if this were their first day of student teaching and they were to remember that the episodes were set up chronologically, i.e., #1 was early in the school day, #8 was close to lunch time and #16 was at the end of the day. For each of the sixteen episodes, the following schedule was observed:

a. 1/2 minute to read the episode description

b. 1/2 minute (on the average) to view the stimulus situation

c. 2 minutes to fill in the needed material to explain how, when and where they would solve the problem - as they identified it.

Once pretest scores were determined, students were ranked from high to low on pretest score, divided into groups of three, and then randomly assigned to training mode. In the event of tied scores, Ss were randomly assigned to a level. Rating criteria have been described elsewhere (Kersh, 1965).

Training. At the termination of the orientation sequence, Ss began training which involved the showing of ten problems. A detailed description of the three training procedures is found in Appendices C and D. It should be noted that the procedures with respect to the "combination" mode were revised during the Spring quarter, 1966. During the first term of the experiment, this mode combined the response flexibility objective with the cue discrimination objective, and the consequence of response objective. This arrangement was found to be "artificial" and was abandoned for the 1-2-1 arrangement as explained above. To assess the efficiency of training, several measures were taken, including: (1) the number of times that the film episodes had to be recycled; (2) the number of prompts required by Ss; and (3) the amount of instructional time.

Post-test. Within two weeks following the completion of training, and before the end of the quarter, each S was tested individually in the simulation facility. A series of problem episodes were shown similar to the pretest. Instructor guidelines found in Appendix C indicate the procedure and the measures obtained.

Retention Test. The retention test was administered six weeks after the completion of simulation training, during the next quarter. The test consisted of 8 of the 16 episodes used for the pretest. The test required an hour of administration time. It was administered in a large group setting and Ss wrote their responses as was the case with the pretest. Since Ss were all enrolled in the same course (Junior Block II) following the quarter that they received training in conjunction with Junior Block I, the retention test was administered during a regularly scheduled class period.

Due to scheduling conflicts and the adjunct nature of training at the U of O, Ss could not be given the retention test without prohibitive expense. Also, Ss who were trained during the spring quarter, 1965 could not be given the retention test because of the summer vacation. Appendix F contains the instructions given to the instructors for the administration of the test.

Classroom Evaluation of Trainees. Evaluations were made of the trainees' teaching during the quarter following Classroom Simulation training. As part of the Junior Block II experience, the students attended an elementary classroom in the college area one morning a week. They usually taught for a period of about 1/2 hour and the rest of the time they observed other student-teachers or the cooperating teacher. This experience could more appropriately be labelled "participation teaching" rather than student teaching. But since student teaching would not take place for almost another year it was obvious that an evaluation of the effect of simulation training on teaching performance should occur during the "participation-teaching" experience.

Two evaluations of teacher trainee behavior were made. One was by trained observers utilizing a classroom management observation system designed specifically for this research. Overall comparisons of the effectiveness of teacher trainees were made by comparing: (1) the amount of disturbance time; (2) amount of management and stimulation time; (3) number of disturbances, and (4) number of management and stimulation behaviors. The other evaluation was by the cooperating classroom teacher using Ryan's Classroom Observational System. The dimensions of behavior observed, the procedures followed, and the data on the reliability of observers, are reported in Appendix H. The actual instruments used are recorded in Appendix I.

Learner Characteristics Measures

Tests were administered to Ss during class time in order to assess individual differences of cognitive and personality factors. The cognitive factors were assessed utilizing a selected group of tests from the ETS Kit of Cognitive Tests. Specifically, the aptitude measures taken were:

(1) speed of closure (Cs-1
(2) syllogistic reasoning (Rs-3)
(3) induction (I-2)
(4) spatial scanning (Ss-1)
(5) perceptual speed (P-3)
(6) visualization (Vz-2)
(7) ideational fluency (Fi-1)
(8) figural adaptive flexibility (Xa-2)
(9) originality (high) (O-1)
(10) originality (low) (O-1)

Tests were chosen that were likely to reflect differential aptitudes which were likely to result in interactions with the three treatments. The number of tests was limited by the constraint of one hour of administration time.

The Edwards Personal Preference Schedule was used to assess Ss' personality differences. A primary reason for choosing this particular instrument was that it was already being used by the instructors in the teacher education (Junior Block) program.

The sixteen factors on the Edwards Personal Preference Schedule are:

(1) achievement (ach)
(2) deference (def)
(3) order (ord)
(4) exhibition (exh)
(5) autonomy (aut)

(6) affiliation (aff)
(7) intraception (int)
(8) succorance (suc)
(9) dominance (dom)
(10) abasement (aba)
(11) nurturance (nur)
(12) change (chg)
(13) endurance (end)
(14) heterosexuality (het)
(15) aggression (agg)
(16) consistency (con)

All Ss received individual feedback concerning their scores as well as an explanation of the test factors. Appendix G contains detailed explanations of each cognitive and personality factor mentioned above.

Instructors

All of the instructors held a Master's degree in Education and most had public school teaching experience. The two instructors at OCE were employed full-time with the Teaching Research Division, and with the project throughout the entire duration. One of the instructors had taught for 3 years at the 6th grade level and the other for 3 years at the junior high level.

The instructors at the U of O were actively pursuing doctoral programs in education and were part-time graduate assistants. The turnover rate among these instructors was high. Only one instructor remained throughout the project. He had 5 years of public school teaching experience. There were two other instructors at the beginning of the project. One terminated at the end of the Winter quarter 1965-66, and the other at the end of the Spring quarter 1965-66. Another instructor was hired at the beginning of the Fall quarter 1966-67, but was terminated during the winter quarter 1966-67. Two of these instructors had teaching experience, one at the high school level.

Training of Instructors. Three of the five instructors who began the project had been instructors of a previous Classroom Simulation project (Title VII, Project #5-0950, see Twelker, 1966) during the Fall quarter of the 1965-66 academic year. With the help of the two instructors at OCE a set of instructions were developed and distributed to all instructors (see Appendix C). These represented, however, only a portion of the interchange of ideas that occurred among the staff. Later, in April, 1966, modifications that had developed and flow charts of the instructional paradigms were summarized and distributed to all (see Appendix D).

One difficulty of the rather complex instructional system was the degree of inter-instructor variability. The flow charts constitute a partial record of the efforts to reduce this source of variance. However, a careful examination of the instructional procedures will indicate that there were still many sources of variance brought about by the necessity of subjective judgments. The value of the flow charts lay in the fact that the variance sources were more precisely pinpointed. During training, efforts were made to reduce the variance from these sources.

The degree of consistency among the instructors' judgments made during pretesting, training, and post-testing were evaluated throughout the project. The evaluation of the reliability of the judgments occurred after training had taken place. Since a new instructor came into the project at the beginning of the second year additional evaluations were necessary. The following information summarizes the extent and results of the evaluations.

Reliability of Pretest Scoring. Assessment of the inter-rater reliability of the pretest scores took place twice during the project. The first assessment was of data collected at the beginning of the 1966 Spring quarter from the three research assistants at U of O and the two at OCE. They each rated independently the written responses of 15 Ss to the 16 episodes of the pretest. The ratings were converted to numerical values and summed to obtain the pretest score. The reliability of a single measure as determined by the ANOVA procedure described by Winer (1962, p. 124-132) was .551. Table 2 contains the product-moment correlations between each pair of raters.

	OCE_2	U of O_1	U of O_2	U of O_3
OCE_1	.602	.759	.418	.590
OCE_2		.704	.452	.738
U of O_1			.551	.729
U of O_2				.602

Table 2. Product-moment correlations between instructors (Spring, 1966). The dependent variable was the pretest score.

The second assessment at the beginning of the Winter term, 1967 involved the ratings of the research assistants at U of O and the two at OCE. The data rated was that of the pretests of the Fall term Ss at U of O. The data were scored at the beginning of the Winter term, 1967. This time the reliability of the ratings of the individual episodes were assessed. The ratings of the responses of 4 Ss to 16 episodes were used resulting in a total n of 64 observations. The reliability of a single measure as determined by the ANOVA procedure described by Winer was .707. Table 3 contains the product-moment correlations between each pair of raters.

	OCE$_2$	U of O$_3$	U of O$_4$
OCE$_1$	.89	.53	.86
OCE$_2$		.57	.83
U of O$_3$			.72
U of O$_4$			

Table 3. Product-moment correlations between instructors (Winter, 1967). The dependent variable was the ratings of responses of 4 Ss to 16 pretest problem episodes (n = 64). (Note: Instructors U of O$_1$ and U of O$_2$ were not on the project during the 2nd year.)

Reliability of Training and Post-test Scoring. The training score primarily assessed was that of the rating of the 1st, 2nd, and 3rd responses of Ss to the episodes shown during training. This rating was quite similar to the rating of the pretest. However, the major difference was that the raters observed the S simultaneously instead of reading a written response and sat right by each other in the training facility. The ratings were independent as there was no conversation while the raters made their rating of each response. Data was gathered three different times. In each instance one of the research assistants acted in the usual training manner with a volunteer S while the other assistants observed and recorded their ratings.

The first assessment took place at the beginning of the project at the start of the Winter term, 1966. The research assistants included the three from U of O and the two from OCE. The data from the 4th through the 10th episodes of a post-test of one S were collected. Four different measurements were obtained:

1. 1st R (First Response). The first response that S makes to the problem episode .

2. Dc (Cue Discrimination). S's description of the problem.

3. Rf (Response Flexibility). Three additional responses to the problem by S.

4. Rc (Consequence of Response). S's description of what would happen as a result of a given response by her.

This is repeated on each episode.

Thus there were 7 observations of the 1st R, 7 observations of Dc, 21 observations of Rf (2 were deleted because of ambiguity) and 14 observations of Rc (one was deleted because of ambiguity) from which the reliability of these measures was determined. The reliability of a single measure as determined by the ANOVA procedure described by Winer was as follows for each of the measures:

1st R ---- .89

Dc ---- .69

Rf ---- .87

Rc ---- .61

The second assessment took place at the beginning of the second academic year of the project, at the beginning of the fall term, 1966. The research assistants consisted of the 2 from U of O and the 2 at OCE. The reliability assessment this time was of the 1st, 2nd, and 3rd responses of an S to 10 problem episodes. Thus the reliability assessment was across 30 observations. The reliability of a single measure determined by the Winer ANOVA procedure was .605. Table 4 contains the correlations between each pair of raters.

	OCE$_2$	U of O$_3$	U of O$_4$
OCE$_1$	.77	.58	.76
OCE$_2$		.72	.91
U of O$_3$			.88

Table 4. Product-moment correlations between instructors (Fall, 1966) of the 1st, 2nd and 3rd responses of an S to 10 training problems (n = 30).

Because the correlations involving research assistant U of O$_3$ were rather low he came back to OCE the next week for another check. The same procedure as above was repeated with another S. Twenty-nine observations were used instead of 30 as one was ambiguous.

The reliability of a single measure determined by the Winer ANOVA procedure was .78. The correlations of the three instructors are recorded in Table 5.

	OCE_2	U of O_3
OCE_1	.85	.82
OCE_2		.68

Table 5. Product-moment correlations between 3 instructors (Fall, 1966) of the 1st, 2nd and 3rd responses of an S to 10 training problems (n = 29).

III. RESULTS

Methods of Analysis of Training and Immediate Post-Test Data

The training and immediate post-test data from both schools for all three terms were combined in a four-way analysis of variance. Each measure was analyzed separately. Since administrative problems made it impossible to insure that each treatment group had an equal number of subjects, the general linear hypothesis model (Kempthorne, 1952, pp. 234-251) was used to avoid arbitrarily eliminating subjects to equalize the observations per cell and to gain accurate estimates of the main and interaction effects of independent variables. The general linear hypothesis program, BMD05V, (Dixon, 1964) with revised routines - EO DATA and missing data (Blanks) - programmed by Associated Data Consultants, was used. To gain accurate estimates of simple effects and differences between individual groups in cases of statistically significant interactions, the Newman-Kuels procedure was used (cf., Winer, 1962, pp. 210-211; 238-239; 80-85). In an effort to obtain an assessment of the replicability of any treatment findings, the study was conducted and analyzed over several terms. In this manner, any differences that existed between treatments were subjected to a test that determined if terms, or different samples of Ss, for that matter, interacted with the results.

Four factors were analyzed in the study:

Treatment	(A)	(1)	Successive
		(2)	Combination
		(3)	Simultaneous
Pretest Level	(B)	(1)	Low
		(2)	High
Term	(C)	(1)	Spring, 1966
		(2)	Fall, 1966
		(3)	Winter, 1967
School	(D)	(1)	Eugene
		(2)	Monmouth

Four cells of the resulting 3 x 2 x 3 x 2 matrix did not contain any data. These were cells including Ss who would have received the successive treatment at Eugene during the Winter term of 1967 and Ss who would have had low pretest scores Winter term, 1967, at Eugene. Table 1 of Appendix J shows the number of entries in each of the cells.

Analysis of Pretest Scores

Examination of Table 6 reveals that the schools differed significantly in pretest scores. The pretest scores of the U of O Ss were judged to be considerably lower than those of the OCE Ss.

	n	$\overline{X}$	s	t	p
OCE	71	30.7746	3.4814	4.98	$< .001$
U of O	52	26.3077	4.7714		

Table 6: Analysis of difference of pretest score means between OCE and U of O.

Efficiency of Training

In order to determine if one of the training procedures was more efficient, three measures were analyzed: (1) total number of times that film episodes were shown during instruction, (2) total number of prompts that were given during instruction and (3) total amount of instructional time. In regard to the first measure, it was reasoned that the more times film episodes had to be recycled, the less efficient the training. Likewise, the more occasions that prompts were given during instruction, the less efficient the training. Both measures are closely related to the third, the amount of instructional time. These data may also be taken as a basis for judging the comparability of the training across time and settings. The F-ratios of the tests of the main effects and interactions are found in Table 7. More complete summaries of the analyses of variance are found in Appendix J, Tables J-2 through J-9. Cell means of all of the analyses which are significant are found in Tables J-10 through J-20.

Total Films During Training. Examination of Table 7 reveals that the Treatment main effect, the Treatment x Term interaction, the Treatment x School interaction, the Term x School interaction, and the three-way interaction attributable to the Treatment, Term and School factors were statistically significant ($p < .01$). Cell means associated with the interactions are shown in Tables J-12 through J-15, and graphed in Figures 3-6.

The interpretation of significant main effects is dependent on the interpretation of significant interactions. If one were to simply interpret the main effect alone, it would be found that the films were shown more times in the Successive treatment than during either the Simultaneous treatment or the Combination treatment ($p < .01$). Do these results replicate over terms? Examination of the Treatment x Term interaction

	Training			Post-test				
Factors and Interactions	Total Films	Total Prompts	Inst. Time	1st R	Dc Total	Rf Total	Total Incorr. KOS	Total Incorr. Rc
Treatment A	46.73*	1.39	6.46*	.43	.65	.46	.32	.23
Pretest Level B	3.33	.43	.14	.29	1.23	.62	3.34	1.30
Term C	.86	2.86	4.89*	.87	4.91*	44.63*	2.40	.35
School D	.23	2.89	10.22*	30.49*	54.85*	39.18*	11.48*	17.46*
AB	.07	.57	1.21	3.74	.33	.15	1.76	.20
AC	5.27*	.41	.47	.47	.66	.15	1.87	1.04
AD	7.51*	.95	1.52	.49	.45	.16	1.98	1.06
BC	.31	.06	.12	.16	1.07	2.97	.43	2.20
BD	2.05	1.63	.00	2.27	.94	.66	.06	.18
CD	5.75*	8.81*	.34	.68	1.17	39.96*	2.52	3.02
ABC	.80	1.48	.33	1.03	1.04	.90	.79	.72
ABD	.19	.01	.47	.17	.18	.11	.05	1.13
ACD	5.77*	1.40	.25	.33	.21	.89	.43	.61
BCD	2.65	.58	.03	.51	.29	10.00*	.69	1.32
ABCD	.33	1.03	.65	.43	.06	.40	1.53	.32

* $P < .01$

Table 7. Summary of the F-ratios of the tests of the main and four-way interactional effects of the training and immediate post-test measures (n = 123)

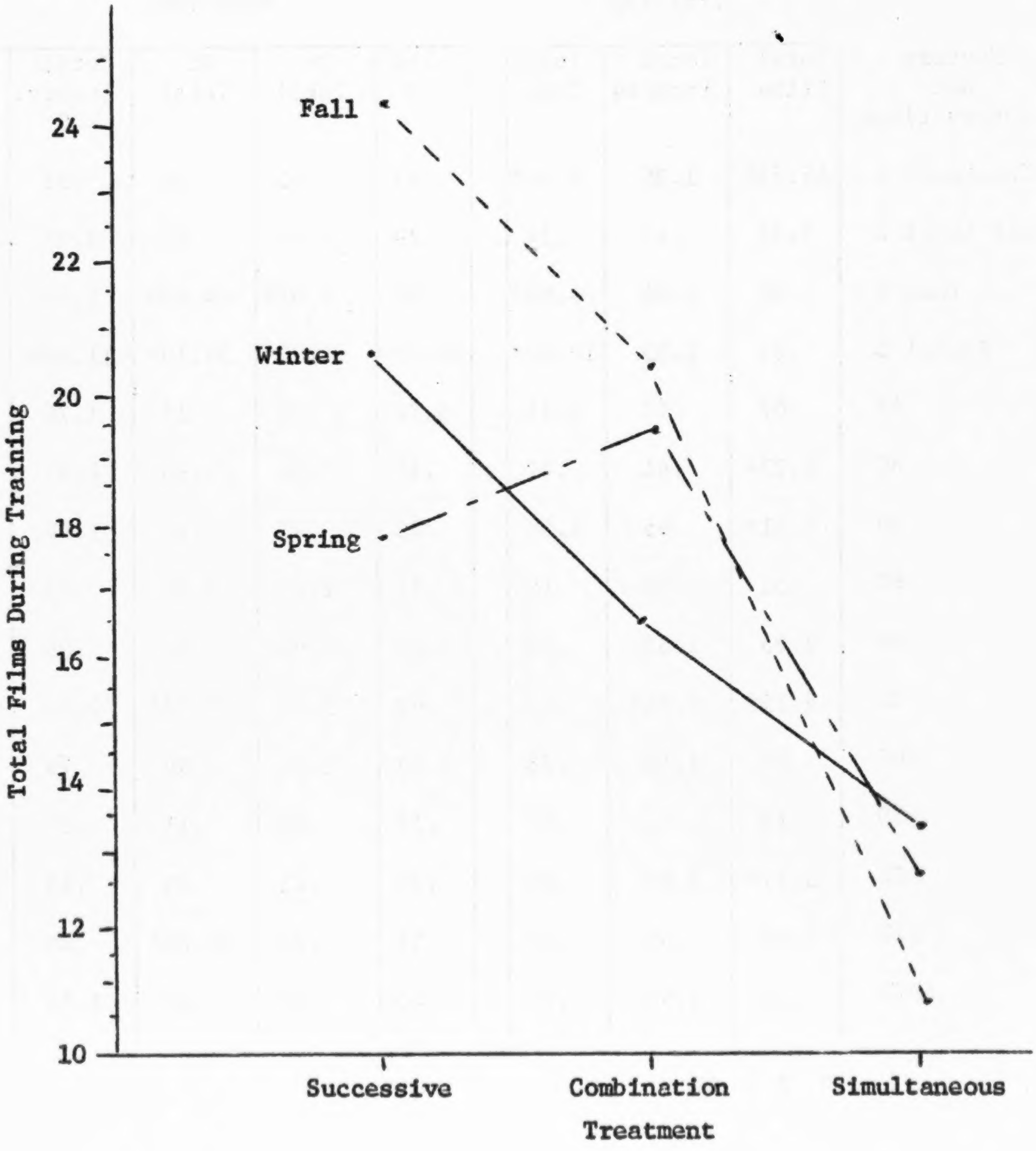

Figure 3. Profiles of means showing the Treatment x Term interaction. The dependent variable is the mean number of films shown during training.

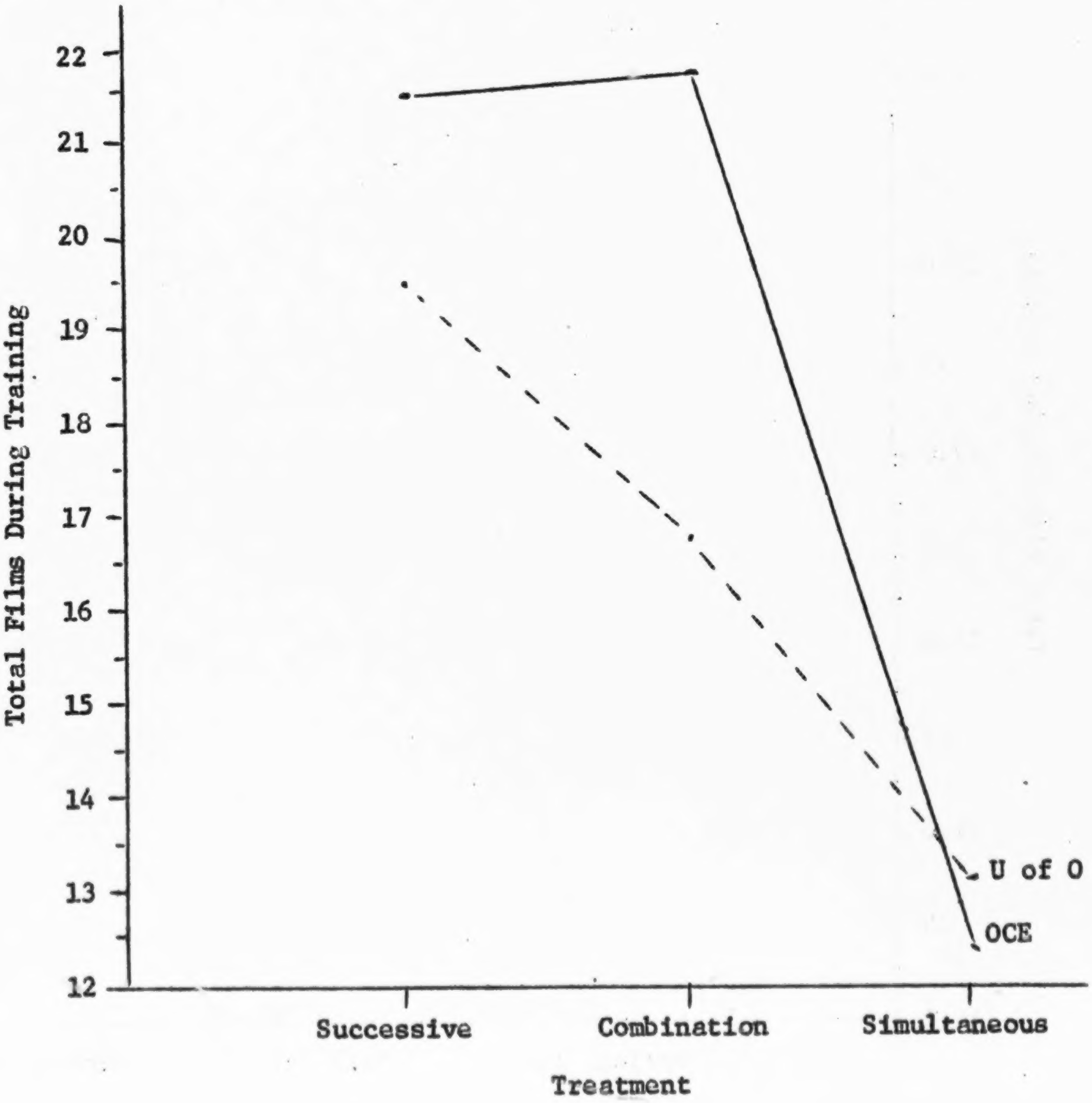

Figure 4. Profiles of means showing the Treatment x School interaction. The dependent variable is the mean number of films shown during training.

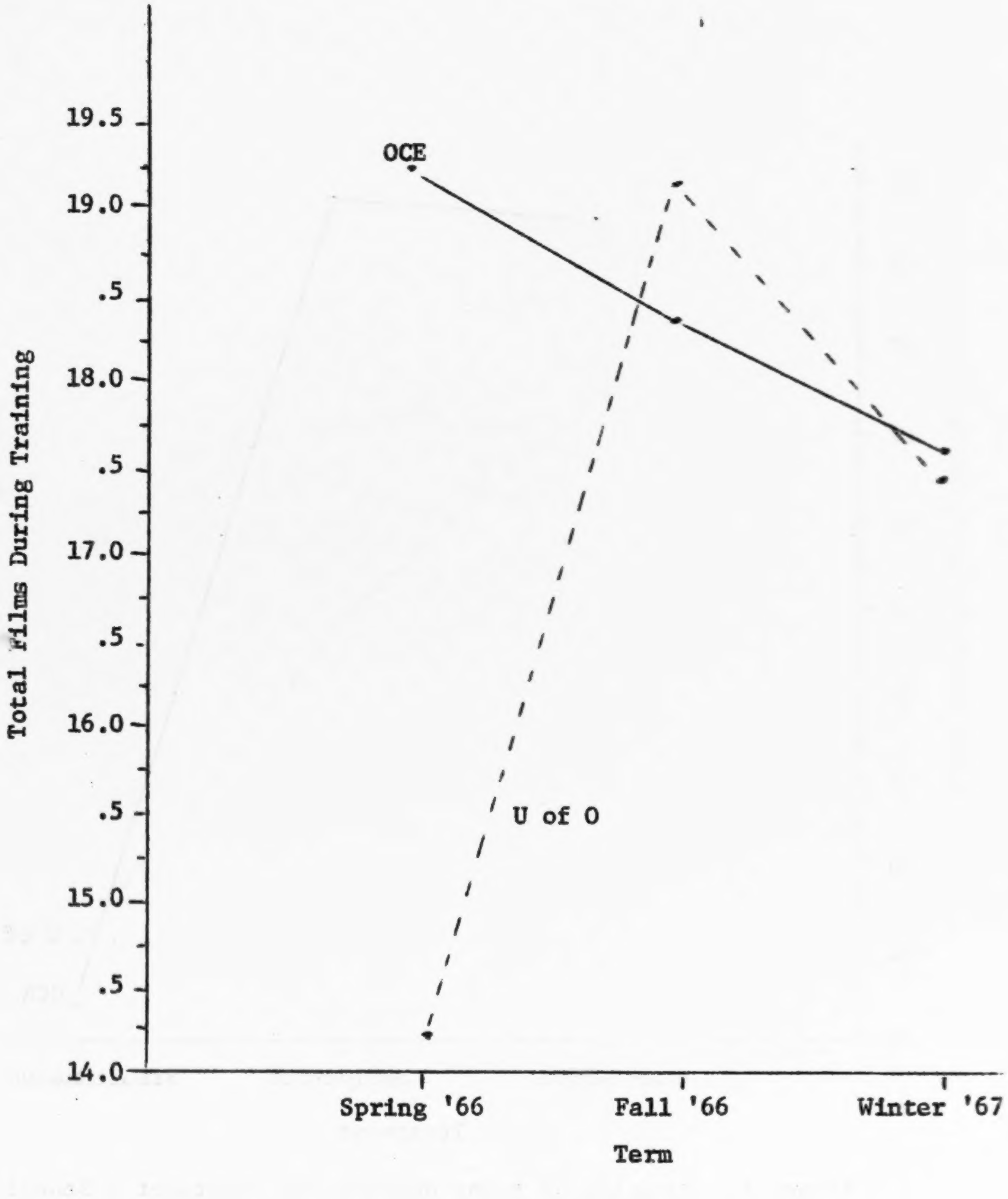

Figure 5. Profiles of means showing the Term x School interaction. The dependent variable is the mean number of films shown during training.

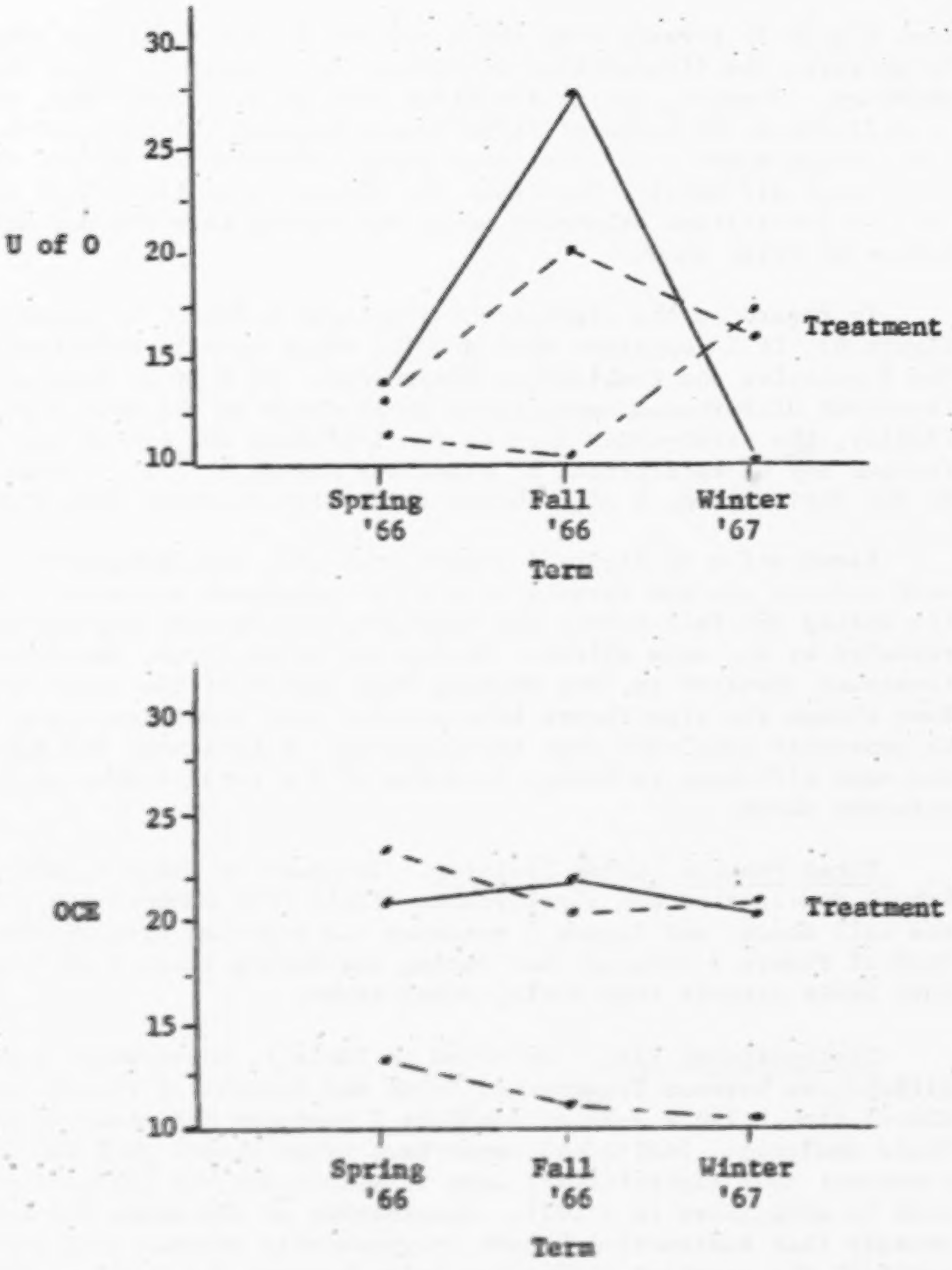

Figure 6. Profiles of means showing the Treatment x Term x School interaction. The dependent variable is the mean number of films shown during training.

(see Figure 3) reveals that these results do not replicate over terms. To be sure, the Simultaneous treatment does result in fewer film showings. However, during the first term of the experiment, there was no difference, in terms of films shown, between the Successive and Combination modes. In subsequent terms, differences between these treatments did exist. Note that the change in instructional procedures for the Combination treatment after the Spring term did not alter the number of films shown.

In regard to the significant Treatment x School interaction (see Figure 4), it is apparent that at OCE, there were no differences between the Successive and Combination treatments. At U of O, however, the treatment differences approximate those shown by the main effect. Finally, the first-order interaction involving the school and term factors may be interpreted by examining Figure 5, which reveals that in the Spring term, U of O showed fewer film episodes than did OCE.

Examination of Figure 6 illustrates that the differential treatment effects are due largely to U of O instructor variance. During the Spring and Fall terms, the treatment differences approximated those revealed by the main effect. During the Winter term, the Successive treatment resulted in less showing than either of the other treatments. Even though the significant interactions show some exceptions, it might be generally concluded that the Simultaneous treatment did result in the most efficient training, in terms of the total number of film episodes shown.

Total Prompts During Training. As shown by Table 7, the Term x School interaction was significant. Table J-16 of Appendix J records the cell means, and Figure 7 presents the profiles graphically. Inspection of Figure 7 reveals that during the Spring term, U of O instructors gave fewer prompts than during other terms.

Instructional Time. As noted in Table 7, there were significant differences between Treatments, Terms and Schools of the average instructional time. Table J-11 of Appendix J contains the means of each of these analyses. Individual comparison tests reveal that the Simultaneous treatment took significantly less time than did the Successive treatment to administer ($p < .01$). Examination of the means for each term reveals that instruction became progressively shorter from quarter to quarter, the greatest difference being between the Spring, 1966, and Fall, 1966, quarters ($p < .01$). The difference between the Fall, 1966, and Winter, 1967, terms was not statistically significant ($p < .01$). Finally, significantly greater amounts of time were spent in instruction at OCE than at U of O.

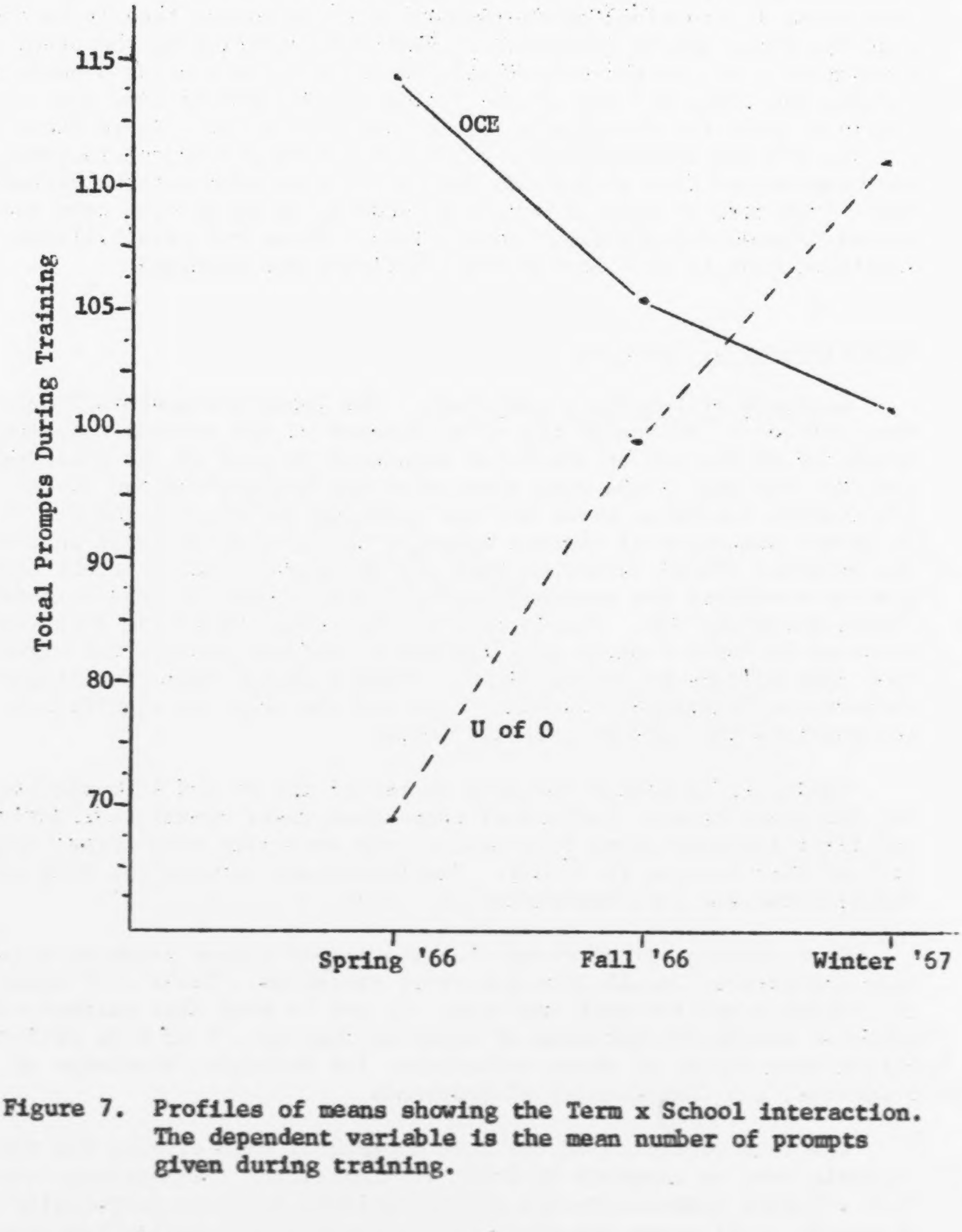

Figure 7. Profiles of means showing the Term x School interaction. The dependent variable is the mean number of prompts given during training.

In summary, if these data are taken as a basis for choosing a treatment mode that seems to be most efficient, in terms of the time spent in training, or the number of films shown, then it is clear that the Simultaneous treatment is generally superior to the other treatments. If, on the other hand, these data are used as a basis for judging the comparability of the training modes across time and settings, then the interpretation is quite different. Since there are significant interactions involving the Term and School factors, it may be reasoned that either the treatments were administered differently from term to term or school to school, or Ss in each term and school represented different populations. These two possibilities should be kept in mind as the other analyses are examined.

Effectiveness of Training

Analysis of Immediate Post-test. The immediate post-test data that was analyzed to determine the effectiveness of the various treatments consisted of the sum of the first responses to each of the episodes (1st R), the sum of the cues identified (Dc Total), the sum of the alternative responses given for the episodes (Rf total), the sum of the incorrect standards of teacher behavior selected as relevant in each of the episodes (Total Incorrect KOS) and the sum of the incorrect consequences predicted for standardized responses to each of the episodes (Total Incorrect Rc). Examination of the summaries of the F-ratios recorded in Table 7 shows that treatments did not produce any significant main effects or interactions. However, there were significant differences between Schools and Terms and the only two significant interactions involved Schools and Terms.

Table J-17 contains the mean scores of the Dc and Rf variables for the three terms. Individual comparison tests reveal that during the first (Spring) term, Ss produced less responses than either the Fall or Winter terms ($p < .01$). The difference between the Fall and Winter terms was not significant ($p < .01$).

From Table 7, it is shown that the School factor produced significant differences on all five post-test variables. Table J-18 shows the School means for each variable. It can be seen that neither school produces consistent patterns of superior results. U of O Ss performed better than OCE Ss on these variables: 1st Response, Knowledge of Standards, and Consequences of Responses.

The interpretation of the Term and School main effects for the Rf variable must be examined in light of significant interactions. The Term x School interaction for the Rf variable is shown graphically in Figure 8. Cell means are presented in Table J-19. Inspection reveals that during the Spring term, U of O Ss gave fewer numbers of responses per problem than other terms. The Pretest Level x Term x School

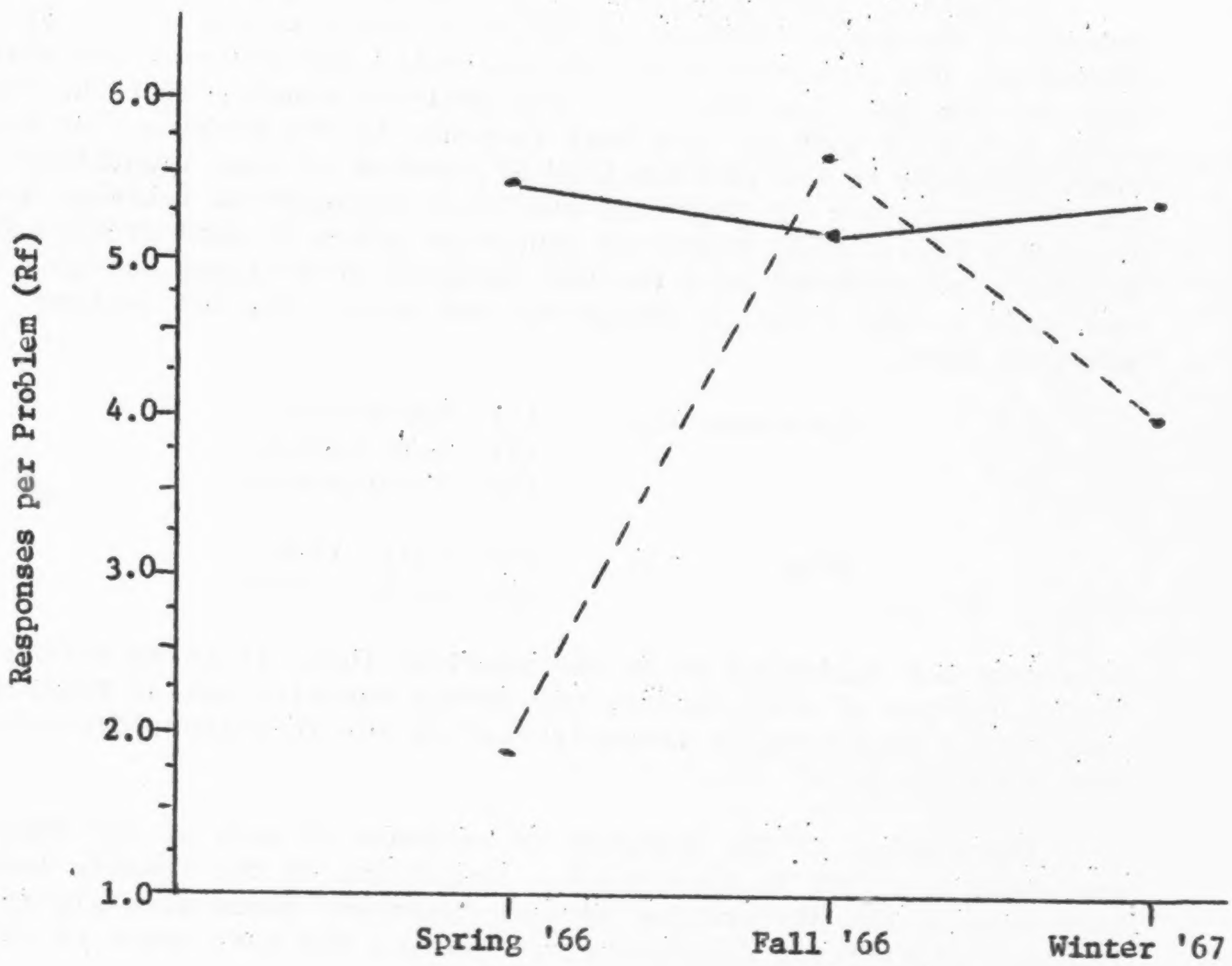

Figure 8. Profiles of means showing the Term x School interaction. The dependent variable is the mean number of responses per problem (Rf) on the post-test.

interaction is presented graphically in Figure 9, and cell means are given in Table J-20. It may be seen that Ss at U of O produced rather different mean profiles than Ss at OCE. At OCE, S's pretest level did not affect scores, while at U of O, it did affect scores during the Winter term.

Analysis of Retention Test Data. As noted previously, limitations prevented the administration of retention tests to the U of O Ss. Therefore, the retention test data collected and analyzed was that of only the OCE Ss. The data which was analyzed consisted of the following total scores of each S: S's best response to the problem (1st R), S's worst response to the problem (2nd R), number of cues identified (Dc Total), number of incorrect standards selected as relevant (total Incorrect KOS), total number of responses given to each problem (Rf). The data was analyzed in a two-way analysis of variance design. Due to the small n, the 4-factor design was not used. The two factors analyzed were:

Treatment	(A)	(1) Successive
		(2) Combination
		(3) Simultaneous
Term	(B)	(1) Fall, 1966
		(2) Winter, 1967

Data were not collected on Ss who received their training during the Spring quarter of 1966 because the summer vacation period intervened causing too much time to transpire before the retention test could be administered.

The summary of the analysis of variance of each of the dependent variables is found in Appendix K. Inspection of the results indicates that none of the differences between treatment means were significant. The only significant difference was between the term means of the Dc variable (Table K-3).

Analysis of Classroom Observations. The dimensions of behavior observed, the procedures followed, as well as data on the reliability of observers, are reported in detail in Appendix H. In summary, overall comparisons of the effectiveness of the trainees were made by comparing: (1) the amount of time class disturbances existed; (2) the amount of time spent by the teacher in management and stimulation behavior; (3) the number of pupil disturbances, and (4) the number of occasions that the teacher used management and stimulation behaviors.

Classroom observations made under satisfactory conditions and which yielded adequate data were made of 34 Ss. Schedule conflicts between observers and Ss and insufficient opportunity for observation due to the nature of the practicum experience reduced the number

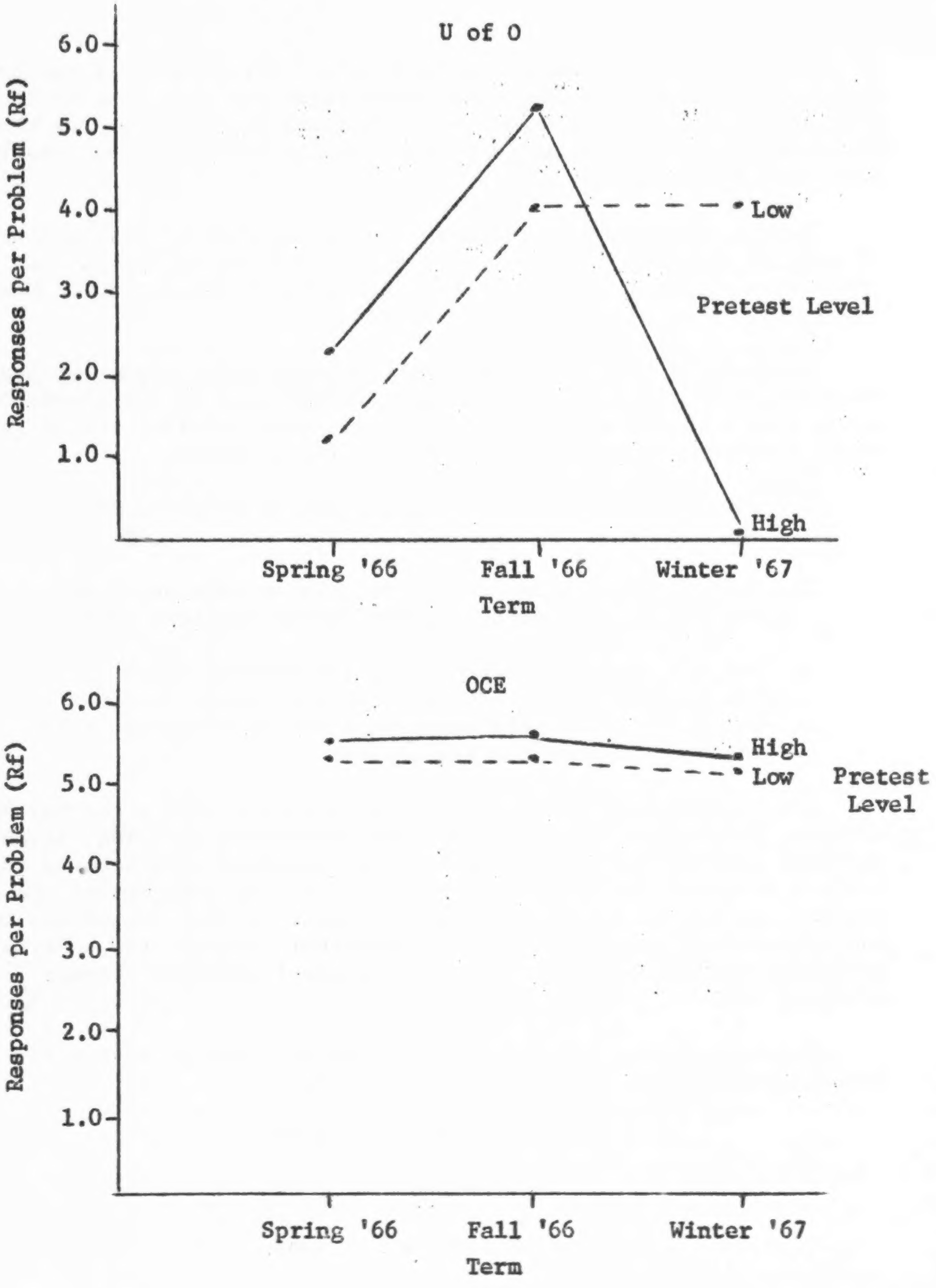

Figure 9. Profiles of means showing the Pretest Level x Term x School interaction. The dependent variable is the mean number of responses per problem (Rf) on the post-test.

of observations that could have been made. Originally, it was hoped to obtain at least one 20-minute observation and many were at least this long. But since a number were shorter, rather than lose that data, or bias the analysis, the first twelve minutes of all observations were used for analysis.

Tables containing the summary of the analysis of the variance of each of the four dependent variables are found in Appendix L. Inspection of the tables indicates that none of the treatment means (Table L-5) were significantly different.

Analysis of Cooperating Teacher Evaluations of Classroom Teaching. Adequate evaluations of the trainees' performance in the classroom using Ryan's Classroom Observation System were obtained for 32 Ss. The small number of observations was due to three factors:

1) Observations could not practically be obtained from the U of O Ss.

2) Observations could not practically be obtained from the OCE Ss trained during the Spring quarter, 1966.

3) Not all teachers responded to the questionnaire. The faculty at one school where the OCE Ss (trained Fall, 1966) did participation teaching would not take the time to make the evaluations.

The resulting 32 observations were analyzed with a one-way ANOVA design. There were 11 Ss who received successive training, 11 who received combination training and 10 who received simultaneous training. Table 8 contains the F-ratios resulting from the analyses of the 22 scales. As can be noted, the F-ratios indicate that two of the twenty-two evaluations were significantly different; namely, the uncertain-confident student behavior (#3) and the aloof-response teacher behavior (#7).

The mean scores for each of the treatment groups of the #3, Uncertain-Confident pupil behavior scale are:

Successive	6.10
Combination	6.09
Simultaneous	4.64

Scale	df	F
PUPIL BEHAVIOR		
1. Apathetic - Alert	2,29	1.92
2. Obstructive - Responsible		.78
3. Uncertain - Confident		4.42*
4. Dependent - Initiating	2,29	1.94
TEACHER BEHAVIOR		
5. Partial - Fair	2,29	1.04
6. Autocratic - Democratic		.68
7. Aloof - Responsive		8.62**
8. Restricted - Understanding		2.17
9. Harsh - Kindly		.52
10. Dull - Stimulating		1.39
11. Stereotyped - Original		.61
12. Apathetic - Alert		.79
13. Unimpressive - Attractive		.43
14. Evading - Responsible		1.84
15. Erratic - Steady		1.66
16. Excitable - Poised		.56
17. Uncertain - Confident		1.90
18. Disorganized - Systematic		.19
19. Inflexible - Adaptable		1.38
20. Pessimistic - Optimistic		1.12
21. Immature - Integrated		.75
22. Narrow - Broad	2,29	.80

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* $p < .05$
** $p < .01$

Table 8. Summary table of the F-ratios resulting from the analysis of the Ryan's Classroom Observation Evaluations made by the cooperating teachers of Ss receiving classroom simulation training.

High scores indicate the students were judged to be more confident. Thus the pupils of *S*s receiving the simultaneous treatment were judged by the cooperating teacher to be less confident (more uncertain) than were the pupils of *S*s receiving the other two treatments.

The mean scores for each of the treatment groups of the #7, Aloof-Responsive teacher behavior scale are:

Successive	6.10
Combination	6.55
Simultaneous	4.91

High scores indicate that the student teachers were judged to be more responsive. Thus *S*s receiving the simultaneous treatment were judged by the cooperating teacher to be less responsive (more aloof) than were *S*s receiving the other two treatments.

It should be noted, however, that since there are 22 scales and the evaluations of each of the scales are not completely independent, it would be expected through chance that one of the F-ratios would have a probability level of .05. Therefore, little importance can be made of this result.

Analysis of the Interaction of Cognitive and Personality Factors with Training Modes. The relationship between various cognitive and personality traits and effectiveness of the training procedures was analyzed by a series of two-way ANOVAs, with the three treatment levels as one factor and the several levels of each of the various cognitive and personality factors as the other. Distributions of each of the cognitive and personality variables were divided into three levels or groups except for variables Rs-3 (Syllogistic Reasoning) and O-1 (Originality) in which *S*s were divided into only two groups. Groups were not equal. Dividing points were selected between discrete scores where the curve of the distribution shifted abruptly, resulting in more scores in the middle group than in each of the tail groups.

The dependent variables selected to be used in the evaluation were: the total instructional time, the adequacy of the first response on the post-test and the retention test, and the amount of management and stimulation time on the classroom observation measure. Brief descriptions of each cognitive and personality variable appear in Appendix G.

Cognitive Variables

	Problem #		1	3	4	5	6	7	8	9		2	10
	Source	df	Cs-1	X2-2	1-2	Ss-1	P-3	V2-2	F-1	0-1	df	Rs-3	0-1
Training Instructional Time	Treatments	2	.87	.72	.56	.07	.47	.83	1.33	.82	2	.76	.94
	Cog. Test	2	2.59	2.84	.21	4.27[1]	1.82	4.14	.82	1.06	1	.00	3.45[1]
	T x CT	4	.86	.29	.29	1.37	.37	.16	1.35	1.26	2	.17	2.08
	Error	102		(85)		(81)	(101)				108		
	Problem #		26	28	29	30	31	32	33	34		27	35
Post-test 1st R	Treatments	2	1.43	1.58	1.65	1.82	1.63	1.53	1.51	1.70	2	1.64	1.55
	Cog. Test	2	1.12	.45	.84	.70	1.78	1.30	.17	.10	1	.74	1.53
	T x CT[4]	4	.38	(3).49	.91	.81	1.61	(3).56	(3).38	1.74	2	1.41	.94
	Error	34						(35)	(35)		37		
	Problem #		51	53	54	55	56	57	58	59		52	60
Retention Test 1st R	Treatments	2	3.33[1]	3.43[1]	.58	2.74	3.64[1]	3.83[1]	1.99	2.92	2	2.28	1.34
	Cog. Tests	2	2.50	5.77[2]	.49	2.54	2.68	1.86	.55	2.34	1	12.75[3]	1.41
	T x CT	4	1.44	1.07	.23	1.17	2.36	.36	.94	1.74	2	.17	.64
	Error	102		(85)		(81)	(101)				108		
	Problem #		76	78	79	80	81	82	83	84		77	85
Classroom Teaching S & M Time	Treatments	2	.34	1.14	.75	.02	.26	.32	.69	.39	2	.65	.59
	Cog. Tests	2	.45	.42	.39	.02	1.41	.76	.29	6.29[2]	1	.21	.15
	T x CT[4]	4	.51	(3)1.89	1.46	.91	.86	(3).18	(3).87	.25	2	2.14	1.14
	Error	29						(30)	(30)				

[1] $P < .05$

[2] $P < .01$

[3] $P < .005$

[4] A "(3)" before an F value indicates that there were no observations in one cell of the matrix. Thus a degree of freedom was lost in the interaction analysis.

Table 9. Summary table of the F-ratios resulting from two-way ANOVAs of measures of a selected training, post-test, retention test and classroom teaching behaviors of groups representing treatment conditions and levels of the 10 measures of cognitive abilities.

Personality (EPPS) Variables

	Problem #		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Source	df	ACH	DEP	ORD	EXH	AUT	AFF	INT	SOC	DOM	ABA	NOR	CHG	END	HET	AGG
Training Instructional time	Treatments	2	.99	1.53	.60	1.92	1.14	1.32	1.23	1.20	.98	1.00	.83	.83	.73	1.29	1.20
	EPPS Test	2	.59	.10	1.27	2.82	1.04	2.50	1.20	2.15	7.91^3	.94	.18	.64	.24	3.79^1	.00
	T x EPPS	4	1.25	.65	.41	.82	.97	.56	1.92	1.47	.30	1.67	1.26	.36	1.15	1.87	.96
	Error	107															
	Problem #		36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Post-test 1st R	Treatments	2	3.06	1.23	1.99	.69	1.63	1.24	1.65	1.03	1.32	.77	2.49	1.76	.45	1.04	.60
	EPPS Test	2	.11	.12	1.53	.69	1.69	1.02	2.41	.91	1.15	.14	1.07	.01	.87	2.36	.06
	T x EPPS^4	4	1.36	.93	.30	1.11	1.25	1.19	1.49	1.47	.41	(3)1.43	2.44	1.59	.29	1.22	.41
	Error	33										(34)					
	Problem #		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Retention Test 1st R	Treatments	2	1.85	2.22	2.23	1.87	1.43	2.23	1.89	2.54	2.22	2.08	1.95	3.17	1.95	2.63	2.14
	EPPS Tests	2	1.83	.09	.36	3.41^1	.53	1.03	1.13	1.78	.33	.94	1.95	.65	1.34	1.00	.88
	T x EPPS	4	.44	1.74	1.05	.53	.15	1.08	.34	.81	.95	.98	.27	2.39^1	.89	1.29	1.18
	Error	107															
	Problem #		86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
Classroom Teaching S & M Time	Treatments	2	.65	.35	.21	.34	.25	.05	.46	.43	.52	1.86	.21	.39	.23	.89	.05
	EPPS Tests	2	1.50	.79	1.42	1.81	.53	3.27^1	.81	1.54	.95	7.21^3	1.06	.51	.49	3.36^1	.80
	T x EPPS^4	4	2.49	1.34	1.73	.86	.48	.33	.74	.04	.26	(3) .68	.75	.92	.45	(3)1.64	.31
	Error	29										(30)					

[1] $P < .05$

[2] $P < .01$

[3] $P < .005$

[4] A "(3)" before an F value indicates that there were no observations in one cell of the matrix. Thus a degree of freedom was lost in the interaction analysis.

Table 10. Summary table of the F-ratios resulting from two-way ANOVAs of a selected training, post-test, retention test and classroom observation behaviors of groups representing treatment conditions and levels of the 15 subscores of the EPPS.

In all, 100 separate ANOVAs were calculated as there were 25 cognitive and personality variables and 4 dependent variables. Tables 9 and 10 contain the F ratios resulting from these analyses. Examination of the tables reveals that only one of the 100 interaction effect F ratios was significant (Problem 72). Since the 100 analyses are not independent, five ratios could be significant by chance. Therefore, this lone significant difference carries little importance. It can be concluded that the study did not find significant interactions between the treatment conditions and the cognitive and personality factors.

Scattered through the 100 ANOVAs are a few significant main effects of both treatment and levels of cognitive and personality factors. However, at least half of them, particularly those at the .05 level must be judged to be due to chance. There seems to be no consistent pattern among these observed relationships.

IV. CONCLUSIONS

Treatment Differences

The differences among treatments were significant for only three of 39 measures representing training, post-test, retention test, and classroom observation variables. Two of the three measures taken during training were significantly different among treatments, namely instructional time and number of times films were shown. None of the five immediate post-test measures were significantly different. None of the 5 delayed post-test (retention) measures were significantly different. The four measures resulting from the classroom observations indicated no differences. Finally, only one of the 22 ratings made by the cooperating classroom teachers indicated significant differences among treatments. Ss were judged to differ significantly in the amount of aloofness or responsiveness during their teaching. Ss receiving the simultaneous treatment were judged to be less responsive than Ss receiving the other treatments.

The differences between treatment main effects of the number of films shown and instructional time is an expected difference, and due to built-in treatment differences. It would be anticipated that the successive and combination treatments would require extra presentations of the films and extra instructional time because of the interrupted (less dense) nature of the instruction. Thus it is evident that the results indicate that there were differences between treatments in terms of efficiency and that the simultaneous treatment was the most efficient.

The only other significant difference between the treatments, the one judgment of the classroom teachers regarding the trainees' confidence indicates that those Ss receiving simultaneous training were not as confident. In view of the large number of non-significant differences among treatments, there is a strong possibility that this difference was spurious.

The conclusions drawn in answer to the three questions concerning treatment effects are:

1) The simultaneous method was a more efficient method of training.

2) No differential treatment effects were detected in the classroom simulation immediate or delayed post-test.

3) No differential treatment effects were detected in the classroom evaluation measures except for one evaluation by the classroom teachers which indicated that Ss receiving simultaneous training were not as responsive to the students. However, this difference could be spurious.

School and Term Differences

The predominant differences of this research effort were those occurring between schools and terms. One of the three training measures, instructional time, was significantly different between schools and terms. All of the five immediate post-test measures were significantly different between schools and two of the five were also significantly different between terms. The pretest score was also significantly different between schools. Further differences between schools, on the retention and classroom observation measures, could not be determined as, it will be recalled, conditions prevented the collection of this data at U of O. However, of the five retention test measures, two were significantly different between terms at OCE.

In considering the meaning of the predominant differences between schools and terms it is important to keep in mind that the school factor is confounded with instructor differences. This consideration is quite important as previous research indicated (Kersh, 1965) that much of the variance was due to instructor differences. In view of this past history of instructor variability, it seems quite likely that the difference between schools and terms is due to instructor differences rather than school student population differences. This alternative seems more likely to the writers, based upon the subjective assessment of the following considerations:

(1) communication difficulties between the instructors at U of O and the staff at OCE,

(2) high turnover rate at U of O,

(3) higher rapport and stimulating, competitive interaction at OCE.

Thus school and term differences reflect lack of adequate control of the context in which the instructional procedures were administered.

Further comparison of the results reveals that more instructional time occurred at U of O and that on three of the five immediate post-test measures the U of O Ss scored better (1st R, Total

Incorrect KOS, and Total Incorrect Rc). On the other hand, on the other two post-test measures the OCE Ss received better scores. Finally the results of the measurement of the variable judged to be of greatest importance, 1st R, suggests low reliability of measurement. The pretest measurement of this variable indicated significant differences between schools with the mean score at U of O being considerably below that of OCE, 26.31 vs. 30.78. Yet on the post-test there was a reversal with U of O Ss considerably higher, 40.64 vs. 33.50. These wide extremes of scores at U of O are judged to be more a reflection of instructor reliability difficulties than actual school differences. Prior research with U of O and OCE Ss (Twelker, 1966) has not indicated such differences. Further, data from previous studies at OCE (Twelker, 1968, Table A-3, p. 32) indicate that the range of post-test 1st Response scores for Ss exposed to a variety of experimental conditions is within 2 points of the OCE results of this research. (This observation is limited, however, by the fact that the instructors at OCE rated all of these Ss.)

Interaction of Cognitive and Personality Factors with Training Modes

It should be noted that this phase of the research was frankly exploratory in nature. The limited number of subjects available for this analysis, and the unclear status of knowledge about the interactions between instructional method and learner characteristics were constraints to be reckoned with. Further, little data were available to the researchers to determine what measures should be taken of learners to assess individual differences.

It was established during the preliminary phase of the study that data should be gathered from 100 or more Ss for each cognitive variable to be considered if factor analysis or discriminate analysis techniques were to be used. Inasmuch as nearly 20 variables were being considered. This indicated that nearly 2,000 Ss were needed to simply identify tests to be given during the experiment proper, and identify patterns in cognitive test scores that were unique to each instructional treatment. Such data collection was beyond the scope of the investigation, and led to the use of ANOVA methods as described above to determine differential effects between treatments for Ss of varying cognitive characteristics.

As mentioned above, the status of knowledge about the interactions between instructional variables and learner characteristics is unclear. Tallmadge and his associates (1967; 1968), in carefully controlled and conducted studies, reported no important interactions between two training methods and 16 measures of trainee aptitudes and interests.

On the basis of other published studies and evidence from their studies, it was concluded that the negative findings resulted from heterogeniety of subject matter and skill content of the course, and the interactions of content with training method.

In the present study, the subject matter was similar for all treatments. However, it is possible that the content might have interacted with the training methods. Perhaps the treatments might have produced differential effects if other content had been used. This hypothesis is not without merit, as the instructional content was somewhat "forced" into the treatments, resulting in rather artificial training methods. Of course, it is conceivable that the training methods chosen for study caused the negative results. Other methods might have interacted with the cognitive and personality variables chosen for study. It is also conceivable that different dependent variables would have produced significant interactions. Finally, it should not be forgotten that the large variance due to instructor differences may have obscured the findings.

Methodological and Conceptual Problems

Several problems came to light as this research effort unfolded which could not be adequately overcome for a variety of reasons. They limited the value of this research endeavor and therefore must be taken into consideration in future developmental and research efforts. Problems which prevented an adequate assessment of the questions to which this research was addressed could and did occur in all of the major elements of any research effort which are namely,

1) the nature of the training materials as they are designed to achieve certain objectives,

2) the manifest training procedures,

3) the environment in which the research occurs,

4) the nature of the observations designed to evaluate the attainment of objectives,

5) the manifest evaluational procedures.

Lack of significatn differences can be due to inadequacies in any of the above-mentioned areas. What will follow will be an elaboration and summary of developments that occurred.

A predominant factor that appeared to obscure any treatment differences was the relatively low reliability at times between instructors. As expdlained above, this factor probably accounts for the significant school and term differences. In part, this would indicate that the training procedures were not specified precisely enough, thus allowing for inter-instructor variability. Examination of the instructional flow charts will reveal that there are certain areas that would require interactions between instructor and Ss that demanded subjective judgments on the part of the instructor. The quality of the interaction would obviously be a function of the experience and knowledge of the instructor. This is one source of variance that needs to be more adequately controlled in future studies. The development of the instructional flow charts during the course of this research effort has resulted in a pinpointed recognition of the sources of variance. It should also be noted that the low reliability between instructors probably was reflected across the various dependent variables measured also. The low reliability between observers for the classroom evaluation instrument was a major problem, and is discussed below.

Environmental and administrative influences are judged to account for a large portion of inter-instructor (or school) variability. Several conditions caused a high turnover of instructors at U of O, thus resulting in greater variability due to insufficient training and therefore lower reliability. This high turnover appeared to be due to possibly three factors:

1) The job requirements were demanding in comparison to other graduate assistanships on campus;

2) The job requirements were not compatible with the interests of most of the graduate instructors,

3) Lines of communication with project administrators were broken by distance and thus rapport and reward suffered.

The possibility of insufficient training can also be considered a likely cause of no treatment differences. As noted earlier, training involved exposure to only 10 problems, whereas pretesting and posttesting involved exposure to 16 problems each time. In prior training procedures with classroom simulation materials, 20 problems were used in the testing and training phases. It would seem that exposure to 10 episodes may not begin to be enough. On the other hand, the instructors were working to capacity and there would not have been time available in which to extend the training phase. Two possibilities present themselves, one, the time spent with each episode was too long, or two, training is not long enough.

Evaluation of the effects of classroom simulation training on classroom teaching suffered from a variety of problems.

1) The observations could not be made during student teaching where supervision and control was minimal. Two alternatives present themselves. (1) Have simulation training just before student teaching rather than a year before, or (2) have the participation teaching that occurs right after simulation training in the Junior Block program to be more like student teaching (an unlikely alternative in view of the constraints and purposes of the experience).

2) The problems that the students were exposed to in simulation training didn't occur in the classroom, at least when the observers were there. In fact, there is reason to believe that the problems might never have occurred in sufficient numbers to measure since control on the part of the supervising teacher was so high. If simulation training were given just before student teaching, the incidents of management problems might increase, thus making simulation training more relevant and evaluation easier. Another alternative is to develop simulation materials that are concerned with more common classroom problems. This observation suggests that a valuable evaluation would be one from the participants who would rate the applicability of the training they received when they teach.

3) The training of observers and collection of observations is quite expensive. When this project was funded it was thought that students could make the observations. This is simply not feasible. Therefore, if observations are to be made in the future it must be recognized that it will be relatively expensive. A conservative estimate of cost and manpower needs could be figured by allowing about 4 hours of observation per subject (thus allowing for travel schedule conflicts, etc.), 40-60 hours of training per observer, and twice the number of observers thought necessary for each year of operation. To this budget item would need to be added travel expenses.

4) The behavioral changes observed in the classroom were specified during this research project which occurred years after the training materials were designed. It is difficult to hypothesize specific behavioral changes in the classroom as a result of training since the materials were never designed to affect classroom performance.

5) Observations that were used in the analysis were too short and based on only one visit. As mentioned above, greater resources were needed.

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APPENDIX A

STANDARDS FOR TEACHER BEHAVIOR

Classroom Simulation Project
Principles of Behavior
Student Sheet

Teaching Research Division
Monmouth, Oregon
May, 1966

Standards for Teacher Behavior

The principles were developed initially by a jury of master teachers in connection with the initial research and developmental effort described elsewhere (Kersh, 1963). The original set of instructional materials and principles have since been revised by the project staff. A partial list of revised principles appear below. The principles are actually rules of procedure applicable to problems of classroom management and communication. Each principle is stated so as to make the behavior alternative clear by stating what is considered undesirable. The first principle, for instance, covers a situation involving rules of procedure when T is not informed of the rules. It states that in problems involving rules of procedure, T should defer to a person in authority; he should not establish his own rules (T, of course, is presumed to be a student teacher who is being supervised by "Mr. Land," the regular classroom instructor).

(1) In situations involving rules of procedure when the student teacher is not informed of the rules, defer to authority vs establish own rules.

(2) Be attentive to the entire class as well as the individual vs be attentive either to the individual or to the class only.

(3) When learners appear bored or inattentive in a situation that does not fulfill the instructional objectives, deal with the group vs deal with the individual(s).

(4) When confronted with conflicting home-school interests, maintain a neutral position vs take sides.

(5) When learners exhibit behavior which deviates from instructional objectives, deal with the individual(s) directly with minimal disruption of instructional continuity vs disrupt instruction.

(6) Encourage student initiative to learn vs discourage student initiative to learn.

(7) When direct action is required to control a disruptive group or individual, communicate at close range vs communicate from a distance.

(8) When direct action is required to control a disruptive group or individual, act quickly _vs_ delay.

(9) Show supporting manner _vs_ show nonsupporting manner.

(10) When learners appear disinterested or confused, stimulate a more active, interested response _vs_ make no effort to change the learner's response.

(11) Discourage undesirable behavior _vs_ encourage undesirable behavior.

APPENDIX B

REPRESENTATIVE SAMPLE OF INSTRUCTOR SCRIPTS
OF
PROBLEM EPISODES

Training Program A
Mr. Land's Sixth Grade:
Episode Situation Descriptions

Teaching Research Division
Monmouth, Oregon
January, 1966

(1) It is shortly after the tardy bell has rung. Mr. Land has been called out of the room. Roll and lunch count have already been taken, and you decide to tell the class something about some recent experience you've had--for example--something you did on your vacation or some educational experience of interest. Start sepaking to the class from the front of the room. The children are listening to you.

(2) It is arithmetic time, and the class is working some problems from their books. Chuck, Yvette, Karen, and Jack are changing the bulletin board at the back of the room, behind Mr. Land's desk. Jack has just returned today from a week's illness. You are watching them from near Terry's desk. Mr. Land is out of the room.

(3) This is a reading lesson later in the morning. You have a group of five youngsters doing oral reading in the Bright Peaks book. You are situated with your back against the chalkboard on the right side of the room looking toward the window. The children are grouped in a semi-circle located partially out of your view to the right of the screen. Others in the class are working on individual assignments at their seats. Mr. Land has left the room with you in charge. You have decided to send Dan to his seat because he has been disrupting the group. As the situation begins, you will see Dan get up and leave the reading group. You have just told Randy to continue reading on page 230 where it begins, "Miss Pickerell soon learned. . ." If you will seat yourself in front of the screen we now will begin with Randy reading.

(4) It is time for a practice spelling test. You are dictating words to the class. Mona, Shirley, and Suzanne are at the board. You have proceeded through 4 or 5 words using this technique; you pronounce the word, and use it in a sentence; the children write the word; you spell the word to them orally and they rewrite the word if it is misspelled. You are standing near the blackboard. The next word is: "apply."

(5) It is near lunch time. You are monitoring the class which has been working at their desks in groups. Mr. Land has playground duty today and he has gone to an early lunch. He asked you to instruct the children to move their desks back to their regular seating arrangement before releasing them for lunch.

You are in the front of the room and it's about time for them to begin rearranging their desks. When Karen comes into view on the extreme left of the room, you say, "It's time to go to lunch, class. Let's put our desks back in the regular seating arrangement." Then they will appear to follow your instructions.

(6) It is after lunch. The children are working in committees on a social studies play as a culminating activity on Argentina. Keith, Bob, Dan, Terry, Randy and Larry are rehearsing their part of the play concerning a historical event. Keith is the dictator on the throne; Bob is an accused rebel. They have not written a script, but they have studied the roles. Now they are ad-libbing their parts.

(7) After recess, the class is having a science demonstration. Greg and Dan are explaining a project at the left side of the class. Greg is at the board diagramming a model, while Dan is explaining it. You are at the right side of the room near Karen's desk. Mr. Land is in his office and you are in charge.

(8) It is later in the afternoon, and the class is engaged in a work and study session. You and Mr. Land are helping out where needed. You are standing near a committee that is working on a special social studies project. It is composed of the boys in the back row: Terry, Keith, Jack, Randy and Bob.

(9) This is the period just before afternoon recess. The children are in a study session. Keith has just finished working on the social studies project and has gone to sit next to Greg (in Dan's place). You have allowed them to talk quietly together.

(10) This is the last period of the day and the class has just returned from recess and are studying at their desks. Mr. Land has instructed the class to finish up any work they have before they go home. Then he left the room. You are at the front of the class, slowly walking down the aisle alongside the chalkboard.

Training Program A-1 (I-2)
Mr. Land's Sixth Grade:
Instructional Procedure
Communication Problem: Confusion

Teaching Research Division
Monmouth, Oregon
December, 1965

Situation: It is shortly after the tardy bell has rung. Mr. Land has been called out of the room. Roll and lunch count have already been taken, and you decide to tell the class something about some recent experience you've had--for example--something you did on your vacation or some educational experience of interest. Start speaking to the class from the front of the room. The children are listening to you.

Problem Scene: Class appears to be listening attentively to something T is saying or doing. Karen looks puzzled and (1) says: "But, I don't understand." (2) Class appears to disagree with Karen.

Hold Cue No. 1: After image blinks.

Release Hold: If T asks, "What don't you understand?" film continues with Karen answering, "The words that you use are so big."

Hold Cue No. 2: After class reaction to Karen.

Supplementary Information: Karen is an over-achiever who strives to please everyone. She insists on pursuing a topic until she understands it completely. Karen's question should not be considered lightly by T.

Standards:

2. Be attentive to entire class as well as the individual vs be attentive either to the individual or to the class only.

10. When learners appear disinterested or confused, it is T's responsibility to stimulate a more active, interested response vs to make no effort to change the learners' response.

Response Matrix

Attend to	Stimulate Active Response	No Active Response
Class and individual	**1** Gives a brief explanation to Karen using a different approach or simpler languag. "Karen, what I meant to say was..." **3** Gives other students a chance to participate. "Well class, can you help Karen out?"	**3** Explains that it will become clear later on. "Just a few minutes, Karen. It will become clear."
Class/individual	**V** Questions Karen beyond initial inquiry. "Karen, what words don't you understand?"	**1** (1) Scolds Karen for not understanding. (2) Scolds class for their reaction. **V** Makes elaborate explanation.

Consequence Matrix

Karen's question would be answered by class or by teacher briefly. Karen smiles, others raise their hands as if to speak	Karen smiles; class raises hands as if to speak.
Class would be bored because they know the answer.	Class and/or Karen would be embarrassed Karen nods and class acts relieved

Problem Assessment Prompts

A. General
  1. What occurred?
  2. What else happened?

B. If #1 isn't verbalized:
  1. What did you hear?
  2. What did Karen say?

C. If #2 isn't verbalized:
  1. What else did you hear?
  2. How did the class react to Karen's statement?

Flexibility of Response Prompts:

A. Can you ask a question of the class that might help Karen out?

B. Can you think of a response (CYTOAR) which wouldn't answer Karen's question at this time?

  1. CYTOAR where would Karen find her answer from the text?

C. Can you think of a question that you might ask Karen?

  1. Could you ask Karen what she doesn't understand?

D. CYTOAR where you would (WYW) not accept Karen or the class's behavior?

  1. CYTOAR where you would criticize the class and/or Karen?

Knowledge of Standard Prompts:

A. General
  G-1. Which statement(s) of standards on your list best describes the most effective method of handling the situation?
  G-2. What were you trying to achieve with this response?

B. Specific

  2-1. Did you maintain the interest of the group, including Karen?

  10-1. Did you stimulate a more interested response?

Training Program A-2 (I-9)
Communication Problem: Inattention-Fatigue Reaction
Mr. Land's Sixth Grade: Instructional Procedure

Situation: It is arithmetic time, and the class is working some problems from their books. Chuck, Yvette, Karen, and Jack are changing the bulletin board at the back of the room, behind Mr. Land's desk. Jack has just returned today from a weeks' illness. You are watching them from near Terry's desk. Mr. Land is out of the room.

Problem Scene: (1) Jack appears distracted and sluggish while working with the committee. Jack withdraws to teacher's desk and says, "Gee, I"m tired." (Knowledge of exact words not necessary to score (1) for problem assessment)

Hold Cue:	Jack mumbles, "Gee I'm tired," and girl looks at Jack.
Release Hold:	If T asks, "What's wrong, Jack?" film continues with Jack saying, "No, I'm just tired."
Hold Cue:	". . . I"m just tired."

Standards

5. When learners exhibit deviant behavior, deal with the individual(s) directly with minimal disruption of instructional continuity vs disrupt instruction.

9. Show supporting manner vs show nonsupporting manner.

Supplementary Information

Jack's academic aptitude is limited, and his motivation is low.

Response Matrix

	Supporting	Non-supporting
Avoids Disruption	1 Supports Jack at close range. Avoids calling the group's attention to Jack's action and does not place him in an embarrassing position. "Sit down if you wish, Jack."	3 Privately requests Jack to return to the committee in a non-supporting manner. "Get back to your work, Jack."
Disrupts	V Involves the group in his support of Jack, thereby placing Jack in a potentially embarrassing position. "Can you find something for Jack to do?"	V (1) Interrupts group and asks how students are doing. "How's it going? Are you getting the bulletin board finished?" 3 (2) Involves the group in the situation and insists that Jack return to work. "What's the matter with this group? Isn't there anything for Jack to do?"

Consequence Matrix

Jack would nod, then sit down. Class would continue working without noticing Jack.	Jack, sluggishly returns and continues working with the group.
Jack would be embarrassed and the people around Jack would be interrupted, especially the committee.	(1) Jack would be embarrassed and the group would be blamed for a problem not of their making. (2) Group says they're all right. Jack stays slumped on desk.

Problem Assessment Prompts

A. General
   1. What happened?
   2. Why did Jack leave the group?

B. If #1 isn't verbalized:
   1. Describe what Jack did.
   2. Was Jack tired?

Flexibility of Response Prompts

A. CYTOAR WYW* react to Jack with compassion?

   1. CYTOAR WYW not call attention to Jack, nor place him in an embarrassing situation?

B. CYTOAR WYW elicit the help of the group in finding something for Jack to do?

C. CYTOAR WYW elicit the help of the group in finding something for Jack to do?

D. CYTOAR WYW involve the group in embarrassing Jack?

Consequence of Response Prompts

   1. What do you know about the (class, group, individual(s)) that led you to make this decision?

   2. Show film again to reveal specific prompts.

Knowledge of Standard Prompts

A. General
   G-1 Which statement(s) of principle on your list best describes the most effective method of handling the situation?
   G-2 What were you trying to achieve with this response?

B. Specific
   5-1. Was the group interrupted by your reaction?
   9-1. Was your response sympathetic to Jack?

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* The acronym CYTOAR WYW stands for "Can you think of a response where you would."

Training Program A-3 (I-15)
Management Problem: Disorderly Behavior
Mr. Land's Sixth Grade:
Instructional Procedure

Teaching Research Division
Monmouth, Oregon
December, 1965

Situation: This is a reading lesson later in the morning. You have a group of five youngsters doing oral reading in the Bright Peaks book. You are situated with your back against the chalkboard on the right side of the room looking toward the window. The children are grouped in a semi-circle located partially out of your view to the right of the screen. Others in the class are working on individual assignments at their seats. Mr. Land has left the room with you in charge. You have decided to send Dan to his seat because he has been disrupting the group. As the situation begins, you will see Dan get up and leave the reading group. You have just told Randy to continue reading on page 230 where it begins, "Miss Pickerell soon learned. . ." If you will seat yourself in front of the screen now we will begin with Randy reading.

Problem Scene: (1) After Dan takes his seat, he begins throwing paper wads at the wastebasket. Other boys join in. (Knowledge of this fact not required)

Hold Cue: Immediately after Brian throws the second time. (After Dan moves over to the wastebasket.)

Supplementary Information

Dan is a capable student and a fast reader. He will resist if pushed - he loves a contest. If he identifies with a problem, he will carry the load independently. He is a rugged individualist, and sometimes immune to social feelings.

Standards

7. When direct action is required to control a disruptive individual, communicate at close range vs communicate from a distance.

8. When direct action is required to control a disruptive individual, act quickly vs delay.

Response Matrix

	Quickly	Delays
Close	1 (1) Instructs Dan to come back to reading group. "Dan, come back to the reading group, please. I want to keep an eye on you." * (2) Instructs Dan to begin a specific assignment. "Dan, that's enough of that! Begin your arithmetic assignment." * V or 2 after hold cue.	2 Same as A, but after first toss of paper.
Distant	2 Same as A but communicates across the room.	3 Same as C, but does not move in. May stop reading group or disrupt them. "Would you stop a minute, Randy, so I can speak with Dan? Dan! That's enough of that..."

Consequence Matrix

Dan would return quietly to the group. Class wouldn't be disturbed. Dan would sit down and begin working immediately.	Other boys would join in paper throwing. Class would be disturbed.
Dan would stop - repeat in an embarrassed manner. Class would be interrupted.	Other boys would join in paper throwing. Would be embarrassed, class would be disturbed.

Problem Assessment Prompts

A. General
   1. What did you see?
   2. What happened after Dan left the group?

B. If #1 isn't verbalized
   1. What did Dan do?
   2. Did Dan toss a paper at the wastebasket?

Flexibility of Response Prompts

A. CYTOAR WYW speak directly to the offender?

   1. CYTOAR WYW speak to the offender at close range?

B. CYTOAR WYW your actions would be delayed?

C. CYTOAR WYW speak to the offender immediately without moving?

D. CYTOAR WYW your action would be delayed and you would remain stationary?

Consequence of Response Prompts

   1. What do you know about the (class, group, individual(s) that led you to make this decision?

   2. Show film again to reveal specific prompts.

Knowledge of Standard Prompts

A. General
   G-1 Which statement(s) of principle on your list best describes the most effective method of handling the situation?
   G-2 What were you trying to achieve with this response?

B. Specific
   7-1. Why did you communicate with Dan at close range?

   8-1. Why did you speak when you did?

Training Program A-4 (I-17)
Communication Problem:
Inattention-Individual
Mr. Land's Sixth Grade:
Instructional Procedure

Teaching Research Division
Monmouth, Oregon
December, 1965

Situation: It is time for a practice spelling test. You are dictating words to the class. Mona, Shirley, and Suzanne are at the board. You have proceeded through 4 or 5 words using this technique: you pronounce the word, and use it in a sentence; the children write the word; you spell the word to them orally and they rewrite the word if it is misspelled. You are standing near the blackboard. The next word is "apply."

Problem Scene: (1) Instead of checking her work as required, Suzanne looks down at her feet and appears inattentive.

Hold Cue No. 1: After scene change (image blinks).

Release Hold: As T begins spelling word.

Hold Cue No. 2: Immediately after black leader.

Supplementary Information

Suzanne is a good student who gives complete cooperation and responds to a challenge.

Standards

5. When learners exhibit behavior which deviates from an instructional objective deal with individuals directly with minimal disruption of instructional continuity vs disrupt instruction.

10. When learners appear disinterested or confused, stimulate a more active, interested response vs make no effort to change the learner's response.

Response Matrix

	Stimulates Active Response		No Active Response	
Avoids Disruption	V	(1)Asks Suzanne to participate with an objective in mind. May remind Suzanne to correct misspelled words. Avoids reprimanding learner. "Suzanne, is your word spelled correctly?"	V	Attracts Suzanne's attention nonverbally or by speaking softly without disrupting lesson.
	V	(2)Instructs the entire group to correct misspelled words. "I would like all of you to rewrite the word correctly if you have misspelled it."		
Disrupts	1	Same as A, but calls attention to Suzanne's behavior, rather than the procedure. "Suzanne, you're not doing what I told you!"	V	Reprimands Suzanne for failing to follow instructions, sends to seat, or in some other way stimulates some other undesirable behavior. "Suzanne, you're impossible! Take your seat and let someone else go to the board." "Suzanne, please take your seat. You simply aren't following instructions."

Consequence Matrix

Suzanne would check her work. Class would not be disturbed.	Class would not be disturbed. Suzanne would eventually return to her work unenthusiastically.
Suzanne, in an embarrassed manner, would check her work. Class would be disturbed.	Class would be disrupted. Suzanne would be embarrassed.

Problem Assessment Prompts

A. General
   1. What occurred?
   2. What else did you see?

B. If #1 isn't verbalized
   1. Did you notice anyone specifically? (May or may not be used)
   2. Describe Suzanne's behavior.
   3. Did she check her spelling?

Flexibility of Response Prompts

A. CYTOAR WYW enable you to ersuade Suzanne to participate more fully in the class?

   1. CYTOAR WYW confidentially speak to Suzanne in such a way that would direct her back to the lesson?

B. CYTOAR WYW direct Suzanne back to the task without approaching her?

C. CYTOAR WYW confidentially speak to Suzanne without directing her back to the lesson?

D. CYTOAR WYW neither direct Suzanne back to the lesson, nor speak confidentially?

Consequence of Response Prompts

1. What do you know about the (class, group, individual(s)) that led you to make this decision?

2. Show film again to reveal specific prompts.

Knowledge of Standard Prompts

A. General
   G-1 Which statement(s) of principle on your list best describes the most effective method of handling the situation?
   G-2 What were you trying to achieve with this response?

B. Specific
   5-1. Did you interrupt the class's work?

   10-1. Did Suzanne begin to check her spelling?

Training Program B-7 (1-13)
Mr. Land's Sixth Grade:
Instructional Procedure
Management Problem: General Dixcipline

Teaching Research Division
Monmouth, Oregon
December, 1965

Situation: After lunch you are in charge of a reading group, reading orally in the Bright Peaks book. You are seated at the right of the room in a semi-circle with five children. Dan has just been disturbing Wendy and you have had Dan and Jackie trade places so he is now seated by Greg. Jackie is reading at the top of page 299, "At the far end of Miss Pickerell's pasture...."

Problem Scene: Dan proceeds to tease his new neighbor, Greg, as follows:

1. Dan kicks Greg
2. Dan pushes Greg's head with his hand
3. Dan kicks Greg when Greg leans forward
4. Dan moves Greg's chair
5. Dan kicks Greg as Greg is putting pencil on ear
6. Dan flips Greg's ear
7. Dan knees Greg as Greg leans forward (just before image blinks).

Hold Cue: Immediately after image blinks.

Supplementary Information: Dan is a capable student and a fast reader. He will resist if pushed--he loves a contest. If he identifies with a problem, he will carry the load independently.

Standards:

5. When learners exhibit deviant behavior, deal with individuals directly with minimal disruption of instructional continuity vs disrupt instruction.

8. When direct action is required to control a disruptive individual, act quickly vs delay.

Response Matrix

		Acts Quickly		Delays
Avoids Disrupting Instruction	1	Stops Jackie, has Dan read	V	Same as ← ← but waits until after Dan pushes Greg's head.
	Verbal	Stops Jackie, asks Dan a question.		
	V	Communicates with Dan nonverbally.		
Disrupts Instruction	V	Stops Jackie, then lectures Dan.	V	Same as ← ← but waits until after Dan pushes Greg's head.
	3	Stops Jackie, asks Dan to change seats.		

Consequence Matrix

Dan reads next paragraph.	Same
Dan would react effectively	
Dan would stop and look attentive.	
Group would have to be re-oriented to the story before continuing	Same

Problem Assessment:

1. Dan teases Greg during the reading lesson.

2. Group distracted. Chuck shown specifically.

Prompts:

A. General
   1. What occurred?
   2. What else happened?

B. If #1 isn't verbalized:
   1. Was anyone being disruptive?
   2. What were Dan and Greg doing?

C. If #2 isn't verbalized:
   1. What was the rest of the group doing?
   2. Was anyone distracted?

Flexibility of Response Prompts:

A. CYTOAR WYW quickly stop Dan's behavior by involving him in the group?

B. CYTOAR WYW eventually deal with Dan in a confidential manner?

C. CYTOAR WYW quickly chastise Dan?

D. CYTOAR WYW eventually chastise Dan?

Knowledge of Standard Prompts:

A. General
   G-1. Which statement(s) of standards on your list best describes the most effective method of handling the situation?

   G-2 What were you trying to achieve with this response?

B. Specific
   5-1. Did your response interrupt the reading group's progression?

   8-1. Why did you act when you did?

Training Program B-8 (I-14)
Mr. Land's Sixth Grade:
Instructional Procedure
Communication Problem:
Inattention-Individual

Teaching Research Division
Monmouth, Oregon
December, 1965

Situation: This is a continuation of the previous situation. You have had Dan and Wendy exchange seats. Wendy is reading now on page 230 in the last paragraph, beginning where it says "There was a heavy clanking sound..."

Problem Scene: Dan becomes bored and inattentive.

Hold Cue: Wendy reads, "...Then she lost consciousness," and image blinks.

Supplementary Information:

Dan is a capable student and a fast reader. He will resist if pushed - he loves a contest. If he identifies with a problem, he will carry the load independently. Dan is an individualist who is immune to social situations and personal reasons.

Standards:

5. When learners exhibit behavior which deviates from an instructional objective, deal with individual(s) directly with minimal disruption of instructional continuity vs disrupt instruction.

10. When learners appear disinterested or confused, stimulate a more active, interested response vs make no effort to change the learner's response.

Response Matrix

	Stimulates active response	Does not stimulate active response
Avoids Disrupting Instruction	1 Asks Dan to read with objective in mind. V Instructs entire group to read with purpose. V Suggests new reading activity.	V Attracts Dan's attention nonverbally or by speaking softly. V Signals Dan to change seats without disturbing group.
Disrupts Instruction	V Interrupts reading activity to carry on tutorial interaction with Dan alone.	3 Sends Dan to his seat. 2 to hold cue Ignores Dan. V Scolds Dan.

Consequence Matrix

Dan begins to read. Dan would respond appropriately and begin to participate in group.	Dan begins to pay attention. Dan would react appropriately.
Dan would interact with T appropriately, but others might appear bored.	Dan returns to his seat Dan continues to show boredom. Dan would pay closer attention, but probably only half-heartedly.

Problem Assessment:

1. Dan looks bored and does not pay attention to reading lesson.

Prompts:

A. General
   1. What occurred?
   2. What else happened?

B. If #1 isn't verbalized:
   1. Was everyone following along?
   2. What was Dan doing?
   3. Was Dan bored?

Flexibility of Response Prompts:

A. CYTOAR WYW change the instructional mode?

B. CYTOAR WYW confidentially call Dan's attention to his behavir?

C. CYTOAR WYW publically chastise Dan?

Knowledge of Standard Prompts:

A. General
   G-1. Which statement(s) of standards on your list best describes the most effective method of handling the situation?

   G-2. What were you trying to achieve with this response?

B. Specific
   5-1. Did your reaction drastically interrupt the reading group?

   10-1. Did Dan willingly rejoin the activities of the reading group?

Training Program B-9 (III-17)
Mr. Land's Sixth Grade:
Instructional Procedure
Communication Problem: Confusion

Teaching Research Division
Monmouth, Oregon
December, 1965

__Situation__: The group reading is now over, and the class is going to hear some book reports. Mr. Land has seen to it that the class has a great variety of reading material. He goes through all the nearby libraries and checks books out, as well as brings his own. The children do not give reports for grades, but only to share a book with the rest of the class. They tell what they like about the book, read a portion that they find most exciting, and tell where they got the book. Karen has been called on to give the first report. She has just read a book by Will James entitled __In the Saddle with Uncle Bill__, in which there is a great deal of stylized language and colloquial expressions. Mr. Land is in another part of the room, and you are standing at the left side, near Yvette's desk.

__Reference__: James, W. __In the Saddle with Uncle Bill__, New York: Scribner's Publishing Co., 1940.

__Problem Scene__: Karen is making an oral report of a book by Will James. Suzanne asks for clarification and Karen reads a portion from the book.

__Hold Cue__: "...easing the appetites for quite a spell."

__Supplementary Information__: Karen is an over-achiever who strives to please everyone. She insists on pursuing a topic until she understands it completely. Karen's question should not be considered lightly by T, and every class member should benefit from the interpretation.

__Standards__:

2. Be attentive to the entire class as well as the individual __vs__ attentive either to the individual or to the class only.

10. When learners appear disinterested or confused, stimulate a more active, interested response __vs__ make no effort to change the learner's response.

Response Matrix

	Stimulates active response	Does not stimulate active response
Attends to entire class as well as individual.	V Gives other students a chance to participate. 1 Gives brief explanation to Karen using simple language.	3 Explains that T will explain the language after the reports, and asks Karen to finish her report.
Attends either to the individual or the class only	V Tries to draw out an explanation from Karen.	3 (a) Makes an elaborate explanation (b) Scolds Karen for not understanding the report.

Consequence Matrix

Others in class would contribute ideas Karen smiles and indicates that she now understands the language of the book, and finishes her report.	Karen nods, finishes report, and takes seat.
Karen would probably not be able to answer T's questions effectively, others in class appear impatient.	Same as ↑

Problem Assessment:

1. Karen communicates to the class that there are parts of the book she does not understand.

2. The class is interested in the question.

Prompts:

A. General
   1. What happened?
   2. What else occurred?

B. If #1 isn't verbalized:
   1. What did Karen say?
   2. What else occurred?

C. If #2 isn't verbalized:
   1. What was the class reaction?
   2. Was the class interested in Karen's statement?

Flexibility of Response Prompts:

A. CYTOAR WYW involve the class in answering Karen's question?

B. CYTOAR WYW eventually answer Karen's question?

C. CYTOAR WYW allow Karen to answer her own question through questioning?

D. CYTOAR WYW publicly chastise Karen?

Knowledge of Standard Prompts:

A. General

   G-1. Which statement(s) of standards on your list best describes the most effective method of handling the situation?

   G-2. What were you trying to achieve with this response?

B. Specific
   5-1. To whom was your response directed?

   10-1. Did Karen and the class seem to understand the answer?

Teaching Research Division
Monmouth, Oregon
December, 1965

Training Program B-10 (II-17)
Mr. Land's Sixth Grade:
Instructional Procedures
Communication Problem:
Inattention Fatigue Reaction

Situation: It is near the end of the day and you have given the children time to start on their homework. You are standing in front of Shirley's desk. She expresses concern for a Social Studies play that will be presented to the school in a week or so. You have just indicated everything will be okay.

Supplementary Information:

Shirley often fails to use her class time efficiently. She often spends so much time doing extra things in class that she is forced to take her work home.

Standards:

6. Encourage student initiative to learn vs discourage student initiative.

Response Matrix

	Supporting Manner	Nonsupporting Manner
Avoids Disrupting Instruction	Manual 1, then 3 Acknowledges that the problem is difficult, but offers help and support. Draws out Shirley's ideas. Does not become overly involved as a teacher and does not involve others. Acts as an "audience."	3 Same as ++, but does not draw out Shirley's ideas. Communicates privately.
Disrupts Instruction	Verbal Publicly involves the group in his support of Shirley, thereby placing Shirley in a potentially embarrassing position and disrupting instruction.	3 Rejects problem as being of no significance. Directs Shirley back to her work.

Consequence Matrix

Shirley would express concern about the Social Studies play.	Shirley nods and resumes her work, commenting "I suppose you're right."
Shirley might feel embarrassed to have her private communication made public.	Same as above.

Problem Assessment:

1. Shirley expresses concern about the forthcoming Social Studies play.

Prompts:

A. General
   1. What happened?
   2. What occurred?

B. If #1 isn't verbalized:
   1. What did Shirley say?
   2. Was Shirley worried?

Flexibility of Response Prompts:

A. CYTOAR WYW privately draw out Shirley's idea?

B. CYTOAR WYW privately direct Shirley back to work?

C. CYTOAR WYW involve the class in Shirley's problem?

D. CYTOAR WYW publically direct Shirley back to work?

Knowledge of Standard Prompts:

A. General
   G-1. Which statement(s) of standards on your list best describes the most effective method of handling the situation?
   G-2. What were you trying to achieve with this response?

B. Specific
   5-1. Was the class interrupted by your discussion with Shirley?
   9-1. Were you sympathetic to Shirley's problem?

Training Program C
Mr. Land's Sixth Grade
Episode Situation: Description

Teaching Research Division
Monmouth, Oregon
January, 1966

(1) The class is engaged in committee work. Mr. Land has stepped out for a few minutes, and left you in charge. You are monitoring a committee which includes Linda, Shirley, Karen and Donna. They are talking about Brazil's coffee industry.

(2) This is a study period. The class is engaged in committee work and individual assignments. You and Mr. Land are monitoring and helping as needed. Right now, you are standing near the left side of the room, monitoring a small committee of four or five including Yvette and Mona. Mr. Land is in another part of the room. It is Mr. Land's desire that the children work together effectively and plan their respective activities as a group.

(3) The children are getting ready to move out to recess. Mr. Land has been called to the office to straighten out a matter concerning lunch tickets. You are standing at the front of the room.

(4) Mr. Land has asked you to take charge of a science lesson. You are having the class read orally in Singer Science Problems page 187. Yvette began at the top of the page. Karen is reading now about seven lines from the bottom of the page, in the middle of the paragraph beginning "According to the theory..."

(5) The science lesson is terminated now, and Mr. Land has structured a spelling exercise for the entire class. The instructional procedure is as follows. First, he has asked you to say one of their spelling words, perhaps in a sentence. The, after they have all had a chance to write it down, you spell it for them and they are expected to check their spelling. If they misspell the word, they are to rewrite it. It is important that they do check and rewrite their misspelled words.

Some of the youngsters are seated, and some are at the board. Specifically, there are three girls writing at the chalkboard at the right of the room: Shirley, Suzanne, and Mona. Fifteen words have been given so far during the last fifteen minutes. The next word is "service."

(6) This is a little later. Linda and a committee were working at the bulletin board near Jack's desk. Linda has announced the fight is going on outside the room and the class bolted for the door. Mr. Land is out of the room, and you are standing at the front.

(7) The class is waiting for a signal from Mr. Land to move into the auditorium for a movie. Mr. Land has gone to check on the time, and has left you in charge. You are standing at the front of the room.

(8) It is later on in the afternoon. Mr. Land is out of the room, and the class is studying at their seats. You are monitoring the study period at the front of the room near the left side.

(9) The class has come in from recess, and the students are studying quietly at their seats. Mr. Land has been called to the office, and has left you to monitor the class. You are standing in front of Mona's desk.

(10) The Social Studies Committees are meeting again this afternoon. You are standing near the committe with Yvette, Mona, Jackie and Wendy.

(11) This is a reading lesson. You have a group of five youngsters who are doing oral reading in the Bright Peaks book (page 228). You are situated with your back against the chalkboard on the right side of the room looking toward the window. The children are grouped in a semi-circle before you. Others in the class are working at their seats. Mr. Land has left the room with you in charge. Jackie is just beginning to read the story while the rest follow along. If you will seat yourself in front of the screen now, the sequence will begin with Jackie reading.

(12) You are standing near Wendy's and Shirley's desks. The class is having a short break in the room. Wendy has told you about her staying up late to watch the "Diary of Anne Frank" on TV. Mr. Land is still out of the room.

(13) Mr. Land has been called out of the room unexpectedly. You have decided to talk to the class about an experience you have had, such as a class, a trip you have taken, or a hobby. You have been speaking to the class for approximately 10 minutes. Continue your talk from the front of the room. The class is listening to you.

(14) Mr. Land had placed a long distance phone call earlier in the day, and it is now ready for him. He has instructed the class to read over a couple of pages in their social studies book, and that upon his return, the topics will be discussed in class. This leaves you in charge of the class. You are monitoring the class, making sure that they are reading the material, and helping where necessary. When the scene opens, you are slowly moving down the center aisle. The rumble you may hear in the background is coming from the class upstairs, getting ready for music and moving chairs around. The class is used to this noise.

(15) You are monitoring a social studies period. The class is divided into three committees, each working on a part of a play the class is planning for a social studies activity. You are currently observing the committee which includes Shirley, Carol, Jackie, Chuck, Suzanne, Jack and Ron. They are seated near the chalkboard. It is Mr. Land's desire that the children work together effectively and plan their respective activities as a group. At present, Mr. Land is in another part of the room. One instructional objective is to have all members contributing to the discussion.

(6) You have some extra time which you weren't planning on. Mr. Land is out of the room. You are near your desk in the front of the room. You were in charge of arithmetic earlier in the day, but you just had time to give the assignment and the students had just started before they had to go out to recess. Because you have some extra time here, you have an idea which you want to present to the class. And this is the idea: we didn't have time to finish our arithmetic this morning and we have a few minutes left before school is out, so let's get out our arithmetic books and finish up that assignment before we go home. When the image appears on the screen, instruct the class to finish the arithmetic assignment.

APPENDIX C

TRAINING INSTRUCTIONS

January, 1966

Instructions for Using Classroom
Simulation Materials
Mr. Land's Sixth Grade

Teaching Research Division
Monmouth, Oregon
January, 1966

The following instructions pertain to a set of simulation materials identified as, "Mr. Land's Sixth Grade." The materials were developed initially as part of a research project supported by the U. S. Office of Education under Title VII, National Defense Education Act of 1958 (Kersh, 1963). A single sixth grade classroom was simulated through the use of motion picture films and printed materials. Mr. Land is the fictitious name of the regular teacher for the class of 22 youngsters. The simulation materials include a complete set of cumulative records for each of the youngsters, a short description of the hypothetical school and community and orientation films showing Mr. Land working with his class in a typical fashion. The main body of the materials used in the instructional phase include a total of 52 problem sequences on film, each with alternative feedback sequences designed to show the student teacher (St) the possible consequences of his handling of the problem. The 52 problem sequences are divided into two training sets of 10 episodes each (programs A and B) and two testing sets of 16 episodes each. The training episodes A and B correspond to one school day and are parallel in terms of the types of problems included.

Objectives. Instruction with the Classroom Simulation Materials is intended to affect the following skills and knowledge of St.

(1) Cue Discrimination - rapid identification of the salient cues or elements that define a particular problem in the episodes.

(2) Flexibility of Response - ease in the production of alternative responses (adequate and inadequate) to the situations presented.

(3) Consequence of Response - prediction of what the class is most likely to do (the consequences) after a particular response the St gives to the problem presented in the episode.

(4) Knowledge of Standards - identification of the educational standards involved in the problem-response-consequence relationship. (See Table 1)

In general, it is conceptualized that the entering capabilities of most Sts will be such that the simulation task will become more one of practice of latent abilities of discrimination and response construction and the organization of prior learning. Perhaps the most unique aspect of the simulation experience is this last aspect, which comes about as the Sts are involved in the prediction and explanation of problem-response-consequence relationships, and the analysis of the educational standards involved.

The following are the criteria that define satisfactory performance for each of the instructional objectives.

(1) Cue Discrimination: St will list all of the salient cues of each episode. These cues are listed on the scripts under the heading "Problem Assessment".

(2) Flexibility of Response: The four alternative response categories constitute a matrix of four cells which appears on the script as the Response Matrix, as described below. St will give at least one response that will fit each of the four cells of the matrix.

(3) Consequence of Response: Associated with each of the four types of St responses are four types of consequences, i.e., response by the class members. Examples of these types of consequences are found in the cells of the Consequence Matrix on the script. St's prediction of the consequence of each of his responses must conform to the definitions given in this matrix.

(4) Knowledge of Standards: St will identify from a list of 11 standards those that are involved in each of the episodes.

Standards of Teacher Behavior

The standards presented in conjunction with this set of problems were developed initially by a jury of master teachers in connection with the initial research and development effort described elsewhere (Kersh, 1963). The original set of instructional materials and rating standards have since been revised by the project staff. The list of revised standards is presented in Table 1. The standards are educational rules of procedure applicable to problems of classroom management and communication. Each standard is based on the jury's intuitive psychological principles of interaction stated so as to make the behavioral alternatives clear by stating what is considered desirable behavior and then contrasting it with what would be considered undesirable. The first standard, for instance, covers a situation involving rules of procedure when St is not informed of the rules. It states that in problems involving rules of procedure, St should defer to a person in authority; he should not establish his own rules (St, of course is presumed to be a student teacher who is being supervised by "Mr. Land," the regular classroom instructor).

In the process of revising the original standards and instructional procedure, it became evident that most problem sequences involved more than one standard. For example, the third episode in Program C, in which Jack says that he has been ill for the past week and should not be allowed to play at recess, involves the first two standards. Accordingly, the most effective way to handle the situation by present standards is to communicate to Jack that Mr. Land will take care of the situation, and to do so in a manner which would be judged "supporting." Note that St is provided no basis for making a decision in the matter. For all he knows, the school authorities may have already established rather definite rules regarding such matters, or Mr. Land may have already been in direct communication with Jack's parents. In the meantime, the standards suggest that St simply accept Jack's message at face value and assure him that his problem will be resolved.

To repeat, most of the problem sequences involve two standards, and each standard is considered dichotomous in that St's behavior either corresponds or does not correspond to the standard. Consequently, four alternative response categories are possible, forming a 2 x 2 matrix with the four cells representing the following combinations: (See Figure C-1.)

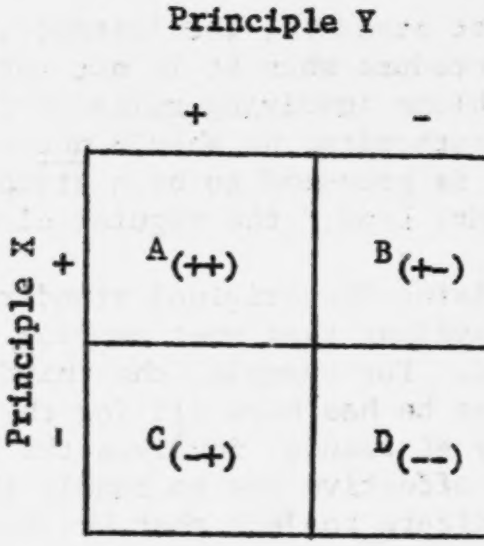

Figure C-1. Model of a Response Matrix

A. St's behavior is in accordance with both standards.
B. St's behavior is in accordance with standard X but not with standard Y.
C. St's behavior is in accordance with standard Y, but not with standard X.
D. St's behavior is not in accordance with either standard.

Instructional Procedure

Instruction consists of two phases, the first being an orientation process. In a group session the prospective Sts are shown a tape-slide presentation of the class that contains pertinent information about the members. Sts are also provided with a self-instructional program about the class. The training objectives of the program are: (1) St will name every child in the class; (2) St will describe the roles the children assume in the class; (3) St will list children having difficulty in reading, social skills, and physical development; and (4) St will list children who are much above and below grade level. Following this the Sts are given a pretest which requires a response to each of the episodes of one of the two testing sequences. Finally the Sts are oriented to the simulation facility and the actual instructional procedure when they come for individual or group instruction.

There are a variety of ways the simulation materials may be used in instruction. The procedures described below are those which are presently employed to determine empirically the capabilities of the material, and certain relationships between student characteristics and learning outcomes under varying conditions of training.

The four instructional tasks will be practiced in three different treatments as follows: (a) one at a time (the successive mode); (b) two at a time, (the combination mode); and (c) four at a time (the simultaneous mode).

Before training begins, a general explanation of the nature of classroom simulation is given. After St understands what to expect, he is then given the following information.

"We think that a teacher needs to learn, among many things, four types of skills and knowledge in order to be effective in the classroom. These skills will be taught and practiced during your training in the Classroom Simulation facility. First of all, teachers need to develop their ability to perceive behaviors that they, as a teacher, must respond to and distinguish behaviors that can be ignored. Teachers need to become sensitive to cues that will tell them that certain problems will result if they don't respond quickly with an appropriate behavior. Secondly, teachers need to develop flexibility in the ways that a situation can be handled. This involves the exercise of one's creative abilities as well as the learning of various responses that are appropriate to many classroom situations. Thirdly, it is not enough to just be able to think of many ways of handling a particular situation.

Teachers must be able to sort out of many alternative responses to a problem situation a response that is satisfactory and good, that is, one that conforms to psychological principles of behavior that have been found to cause a reaction from the class members that is desirable. So, fourthly, teachers need to understand certain standards of teacher behavior that are based upon psychological principles of behavior. A list of 11 standards have been identified by a jury of master teachers as being involved in the problem episodes that will be shown shortly. (At this point St is given a copy of the 11 standards.) It is not enough to be able to read these standards and think that you understand them. As one comes to more fully understand the underlying psychological principles, he is able to cite teacher behaviors that illustrate the principles, look at a problem situation and identify the principles that need to be observed by the teacher in order to maintain an atmosphere conducive to learning. He will be able to look at a problem situation X and say essentially the following:

In this situation X one should do or say such-and-such (which is an example of principle N) because consequence Y is most likely to occur, and this is the most desirable one.

In summary the four types of skills and knowledge that you will develop during simulation training are:

(1) The ability to identify quickly the salient cues or elements that define a particular problem in the episodes.

(2) Flexibility in the production of alternative responses, both adequate and inadequate, to the episodes.

(3) Ability to be able to predict what the class is most likely to do (their consequence) after a particular response that you give.

(4) Ability to identify the important educational standards involved in the problem-response-consequence relationships.

After this explanation St will be given the specific instructions pertaining to the treatment he will receive.

1. Successive Mode (no objectives compounded) Attention will be directed to the attainment of each objective separateby. The first objective to be considered will be the one dealing with the identification of the salient aspects and cues of each episode. E will explain to St that he is to concentrate on learning to identify relevant cues and elements which contribute to a particular classroom problem shown in the filmed sequence. In brief, E will begin by explaining the setting of a problem sequence to St. The problem sequences will be shown, and E will ask St to identify the cues. ("Let's look at each of the problems and see if we can identify what each of the problems are.")

If St assesses the problem correctly, instruction will continue with a different filmed problem sequence. If St fails to assess the problem correctly, the previously shown problem sequence will be repeated. Re-cycling will continue until St assesses the problem correctly. When all problem sequences have been shown, E will explain to St that he is to attend to the next instructional objective, which will be Flexibility of Response. This task would be introduced in the following manner:

"Alright, you have learned about the problems. You have learned something about what is important to respond to. Now, as I said before, that it is also important that you learn to be able to think of not one but a variety of responses. So, without considering which response is better than another, or what might happen if you were to do a certain thing, let's just simply try to come up with a variety of different ways of handling each problem." E should not make any reference to good or bad responses at this point. E should make it a matter of, "Alright that's one, let's try another."

This will continue until St gives enough responses so that there is at least one corresponding to each cell of the Response Matrix. If he has difficulty then the specific response prompts found on the script will be used and/or the episode can be shown over. Note that, as of yet, the feedbacks, either filmed or verbal, have not been used. They will be when we attend to the next objective, Consequence of Response. This objective would be covered in the following manner:

"Now we have thought of a great variety of ways of handling each of these problems. Let's go through them again and see if you can predict what would happen as a result of your different responses."

It will prove quite efficient in going through St's responses again to have recorded them in the previous stage and play them back at this time. Again, in connection with this objective, St will be prompted, giving him as little information as possible with each successive prompt until his response and predicted consequence match. Then he can be shown a filmed feedback or told a verbal feedback as reinforcement.

Finally, the films will be shown a fourth time and St will be asked to state from the list of 11 standards those that are most relevant in formulating the best response in each of the situations. As before, St will be recycled on each problem sequence until he makes an appropriate response. Instruction will continue in this fashion until all objectives have been taught.

2. Combination Mode (two objectives compounded)* The instructional procedure will be identical with that outlined for the first treatment with the exception that two objectives will be considered simultaneously, e.g., the identification of salient cues and flexibility of response. E will explain to St that he is to concentrate on learning both to identify relevant cues and to originate alternative responses.

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* Note: During the first academic quarter of instruction it was observed that this mode of instruction was too arbitrary. It resulted in a very unnatural and uncomfortable form of instruction, both for the instructor and the students. Experience gained during this first quarter of operation indicated that the training procedure should be modified as follows: Sts were first exposed to all instructional problem episodes, concentrating only on the Cue Discrimination task until the objective was accomplished. Then they viewed the films again and concentrated on the Flexibility of Response and Consequence of Response tasks. When these objectives were accomplished the films were viewed again, if necessary, and the Knowledge of Standards task objectives were accomplished.

If St responds appropriately to both tasks, instruction will continue with a different filmed problem sequence. If St fails to respond appropriately to both tasks, the previously shown problem sequence will be repeated. Recycling will continue until St responds appropriately. When all problem sequences have been shown, E will explain to St that he is to attend to two other instructional objectives, e.g., the identification of the consequences of his responses and the identification of the standards involved. Instruction will terminate when all problem sequences have been shown.

3. Simultaneous mode (four objectives compounded) The instructional procedure will be identical with that outlined for the second treatment with the exception that four objectives will be considered simultaneously. E will explain to St that he is to learn all four objectives and that he is to respond appropriately to each task during a trial. In brief, after E explains the setting of a problem sequence to St, the sequence will be shown, and E will ask St to identify the salient cues, originate alternative responses, identify the consequences of his responses, and identify the principles involved. If St responds appropriately to each task, instruction will continue with the different filmed sequences. If St's responses are not appropriate, the previously shown problem sequence will be repeated. Recycling will continue until St responds appropriately. Instruction will terminate when all problem sequences have been shown.

Questioning Technique. During instruction and testing, it is important that E reveal, through his questions, as little as possible of the information that would be of value to St in his efforts to perform to criteria on each of the instructional objectives. The technique to be employed by E is in many respects comparable to that which is used during the "inquiry" phase in projective testing (e.g., the Rorschach). E must be constantly on guard against using leading questions or revealing information inadvertently. Examples of questions which are considered "neutral" as contrasted with "leading" or "revealing" questions are listed below:

Neutral Questions	Leading or Revealing Questions
"What was the problem? Describe it to me."	"What did Jack say to you?"
"Can you tell me more about it?	"Do you think the school has any rules for handling this kind of situation?"
"What else about the situation do you think is important?	"How did the class react to Karen?"
	"Do you remember what happened to Jack earlier in the day?"

Of course, during instruction it will often be necessary for E to prompt St should he fail to make any appreciable progress in his efforts to learn the desired behaviors. Inasmuch as the strategy has been to give the Sts as little information as possible, the prompts range from very general, at first, to quite specific later, and utilize the non-directive approach. These prompts are given only when absolutely necessary, e.g., when St fails to respond within a reasonable amount of time or persists with a particular set. The general prompts will be given first, and then the more specific prompts as they become necessary. The following general information will aid in understanding how the prompts are incorporated in the scripts.

1. Cue discrimination. In the section labeled Problem assessment there will always be found, first, two "stock" prompts, appropriate in all episodes. Following these two prompts are more specific prompts, appropriately identified, to elicit the aspect of the problem that the St is overlooking.

2. Flexibility of Response. There is a prompt corresponding to each of the four types of responses that pertain to each of the cells of the Response Matrix (which represents all possible combinations of the principles operative in the situation). These are labeled A, B, C, and D, and indicate the cell to which the prompt pertains, as follows:

A	B
C	D

All of these prompts begin with the symbol CYTOAR which stands for Can You Think Of A Response. Following CYTOAR is either WYW (Whereby You Would) or WW (Which Would).

3. Consequence of Response. Two "stock" prompts are indicated for use whenever there is a discrepancy between the response and the predicted consequence. Inasmuch as there are 12 possible discrepant situations no attempt has been made as yet to provide more specific prompts. These will be devised by the E keeping in mind the rule to give as little information as possible. Feedback sequences can be used to reinforce St's behavior.

4. Knowledge of Standards. Two general "stock" prompts are provided, along with specific prompts for each standard involved.

Explanation of the Detailed Instructions for Each Episode

The detailed instructional procedure for each problem sequence has been prepared so that E may refer to it directly during instruction or testing. The format is designed to enable E to identify the necessary information quickly and accurately.

Situation

At the top of each set of materials for a particular problem sequence is a description of the situation, typed exactly as it is to be communicated to St.

Problem Scene

Next is a description of the problem scene which is to be used primarily as a reminder for E. The problem scene is not communicated to St before it is projected. The underlined information labelled (1) and (2) is that information which the St will be required to specifically identify as the problem cues.

Hold Cue

As part of the problem scene, the "hold cue" is indicated. This specifies to E where in the problem sequence he will stop the film should St not respond while the problem sequence is being projected. This will also be the point at which E will stop the film during the successive treatment when training is being directed to the cue discrimination objective.

Supplementary Information

In addition to the information included in the stimulus situation and pertinent to background information, the instructions include "supplementary" information which is not considered important enough to be used as a basis for rating St. Instead, the supplementary information may be used simply to confirm the particular choice of behavior recommended in the instructions. Whether or not the supplementary information is brought out in the discussion following each problem is optional. It may be communicated by E directly, or it may be brought out in questions raised by St.

Standards:

These are the ones that have been considered to be relevant to the problem of this episode. The numbers identify their position on the list of 11 that appears in Table 1. The order of the list has no special significance.

Response Matrix:

This has been explained fully previously. The boxes in the corners of each cell indicate the appropriate feedback or typical consequence to the response that the cell represents. Numbers refer to the motion picture reels on which the appropriate feedback sequence is contained. When the projector control system designed by the Teaching Research Division, Oregon State System of Higher Education is employed, the numerals framed in the boxes correspond to the buttons on the control panel which operate the motion picture projectors. If a "V" appears in the box it indicates that the consequence or feedback to the St must be verbal as there is no filmed feedback. The * is explained at the bottom of the cell in which it appears.

Consequence Matrix:

This matrix contains descriptions of the above-mentioned consequences to the four alternative responses. If the consequences were indicated as being on film, the description in the appropriate box is of the film clip. If it was indicated that it was verbal in the Response Matrix Cell, here it is found in the Consequence Matrix.

The remaining sections of the detailed instructions, Problem Assessment, Flexibility of Response Prompts, Consequence of Response Prompts and Knowledge of Principle Prompts, have been explained previously in the instructions.

DATA COLLECTION

Pretest: Sts will be asked to write out the response that they would give to each of 16 episodes that they are shown (one of the testing sequences). These responses will be rated as follows:

A rating of three (3) is assigned when St's behavior is considered effective by both standards, i.e., fits in cell A; a rating of two (2) is assigned when one standard is met, but the other is not i.e., fits in cell B or C; and a rating of one (1) is assigned when St's behavior is considered ineffective by both standards, i.e., fits in cell D; a zero (0) rating is assigned when St fails to respond at all to the problem.

Typical responses for each of these categories are shown on the scripts. It should be stated that, although the revised standards are written as objectively as possible, inevitably there will be occasions when E will have to employ his own judgment in rating equivocal responses. In dealing with "borderline" responses, E is advised to make his decision on the basis of the following standards which are implicit throughout, even though they are not always stated directly:

1. Scolding, reprimanding, employing abusive language, etc., is seldom advisable. In borderline cases, St should be rated down for such behavior.

2. Addressing a child so as to call attention to him or otherwise to place him in an embarrassing position is seldom advisable and also should be used as a basis for a lower rating in borderline cases.

3. Habits of voice communication (low tone of voice, grammatical errors, etc.) also might serve as a basis for a lower rating in borderline cases.

Training: Time, trainee and experimenter responses of each objective of each episode will be noted. The information to be collected and the description of the data sheet are as follows:

1. Time: In the Time column, the time will be noted as St begins to practice each objective of each episode. When an instructional session terminates, the finish time for that session will be noted. Thus the amount of time spent with each objective can be computed.

2. The category of each of St's responses will be noted in the column labeled Rs. In the Obj. (for Objective) column will be noted the Objective of training (Dc, Rf, Rc, or Kcs). Each type of response that E makes to the responses of St will be noted in the Re(Experimenter Response) column.

3. In the Episode # Column is noted the # (number of the episode.

Post test: Six types of measures will be obtained during the post testing. In order of appearance they are as follows:

1. Time: The time at the beginning of each episode is noted as was done during training.

2. 1st R (First Response): Ratings of the St's first response to the post test episodes. These are scored in the same manner as was indicated for the pretest procedure.

3. Dc (Discrimination of cues): Ratings of St's verbal assessment of the problem. St's assessment of the problem is rated by recording his description of the stimulus situation and tallying the number of items of information which

correspond to those listed for each problem sequence. The selection of salient items of information was made by the project staff using the standards for each problem as criteria. In addition to the list of salient items of information in the stimulus situation, some problems involve information which is included in the cumulative files or which was transmitted previously in the particular "simulated day" (Program) involved. For example, Jack is the key figure in several problem sequences. In each problem after the first one involving Jack, it is considered important that St state the fact that Jack was sick during the previous week. Without this information, Jack's behavior may be misinterpreted.

It is necessary only that E question St sufficiently to ascertain which of the items of information listed are included in St's assessment of the problem. Generally, it is a requirement that St verbalize each item of information completely in order to be given credit for it in the rating. The exception to this rule has to do with the statement of the children's names are specified in the instructions, it is not always necessary that St refer to individuals by name. In the event St communicates to E the essential information but does not call the individual by name, E should direct St to identify the individual by name by referring to the group picture of the children which serves as a seating chart.

4. Rf (Response flexibility): Measurements of the number of alternative responses to the projected problems that St can verbalize will be made. A small 2 x 2 matrix has been provided so that a tally mark can be placed in the appropriate cell for each response St makes.

5. Rc (Response consequences): Ratings of St's verbal statements of the consequences of selected response methods to the abovementioned episodes will be compared to pre-established standards. As this test involves experimenter-presented alternatives, this test will be the last to be administered for each filmed episode. One response corresponding to each of the cells of the matrix will be given to St (in random order from episode to episode). In the cell of the matrix in the column labeled Rc that corresponds to the Response given to St, will be entered the letter of the cell of the Consequence Matrix of the consequence that St gives.
To illustrate:

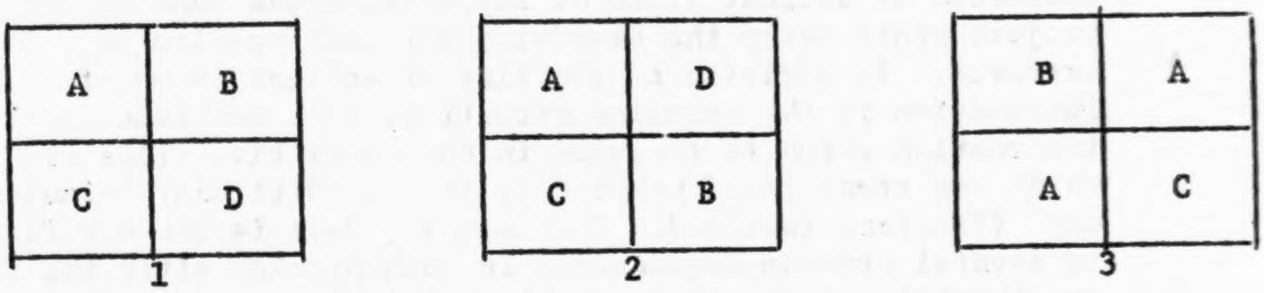


Fig. C-2. Examples of Consequence-Response relationships

In the first example, St gave an appropriate consequence for each of the Responses as the letters A, B, C, D, are in the appropriate cells. In the second example, the only consequences that St gave that were appropriate for the Responses are those for cells A and C as the letters match the cells. In the third example, none of the consequences were appropriate. E will be able to classify the consequences the Sts give by using the consequence matrix provided with each episode.

6. KOS (Knowledge of Standards): Finally the standards that St says are involved in formulating the correct response of each episode are noted in the KOS column. St is only told that there are one or two standards and he is to tell E which ones he thinks they are.

CLASSROOM SIMULATION TRAINING DATA

Date ______________

Session ____________

Name ____________
Treatment_____
Program ______

Time	Episode #	Obj.	Rs	Re
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____
____	____	____	____	____

CLASSROOM SIMULATION POSTTEST DATA

Time	Epi.	1st R.	Dc	Rf	Rc	KOS

Date_______________ Name________________________________

APPENDIX D

TRAINING INSTRUCTIONS

APRIL, 1966

Supplement A
Instructions for the Classroom
Simulation Materials
Mr. Land's Sixth Grade

20-4238
Teaching Research Division
Monmouth
April, 1966

The following information is a supplement to and a partial revision of the instructions for use of the Land Classroom Simulation Materials in the research investigating the Successive vs. the Simultaneous development of the training objectives.

Included with these pages are flow charts of the training procedures to be followed in each of the training modes, Successive, Combination and Simultaneous. The Successive mode remains the same as it is described in the original set of instructions. The Combination mode has changed so that the Response Flexibility and Consequence of Response objectives are considered at the same time and the Cue Discrimination and Knowledge of Standard objectives are considered separately before and after the Rf and Rc set, respectively. As before the S reaches the criterion of an objective on all 10 training episodes before he pays attention to the next objective or set of objectives.

The main revision of the Simultaneous and Combination mode is that the S is shown a feedback (Consequence of Response) relevant to his First Response. Thereafter he must correctly predict what the Consequence of his response will be. The flow chart, however, does add a few refinements to the training process that were not deliniated in the past, but exemplify the procedure of the "inquiry" phase of projective testing.

DATA COLLECTION

Training:

Three types of actions and verbalizations of the E are recorded, namely, I, the instructions he gives; F, the films that he shows, and P, the prompts that he gives.

(1) The instructions that he gives that are to be noted on the Training Data sheet are listed as follows with the shorthand symbol notation to be used on the data sheet. The boxes on the flow charts that contain these instructions are appropriately labeled. These notations are to be put in the column labeled obj.

RR	Discuss disagreement till *S* or you changes judgment.
Dc	Would you recreate the situation?
Dc(a)	Let's look at the situation again and reconsider your description.
CC	Elaborate the description of the consequence.
Rfa	Can you give other ways of causing a satisfactory solution?
Rfbc	What are some (more) inappropriate ways of handling the situation?
Rc	What will the class do as a consequence of what you just did and said?
KOS	What's the difference between your appropriate and inappropriate response?

(2) Anytime the films are shown this action is to be noted in the Rc column. There will be two types of films shown, the episode and the feedbacks, and they will be distinguished in the data recording, as follows:

F	The episode
Fe	The feedbacks (consequence of response)

(3) As before the prompts that have been used will be recorded with the symbols that are found on the scripts. Thus, there are two types of responses that will be distinguished, the General prompts and the Specific prompts. The symbols for the films and prompts will be recorded in the Re column.

Column Labeled Time. At the following points of training the time should be noted.

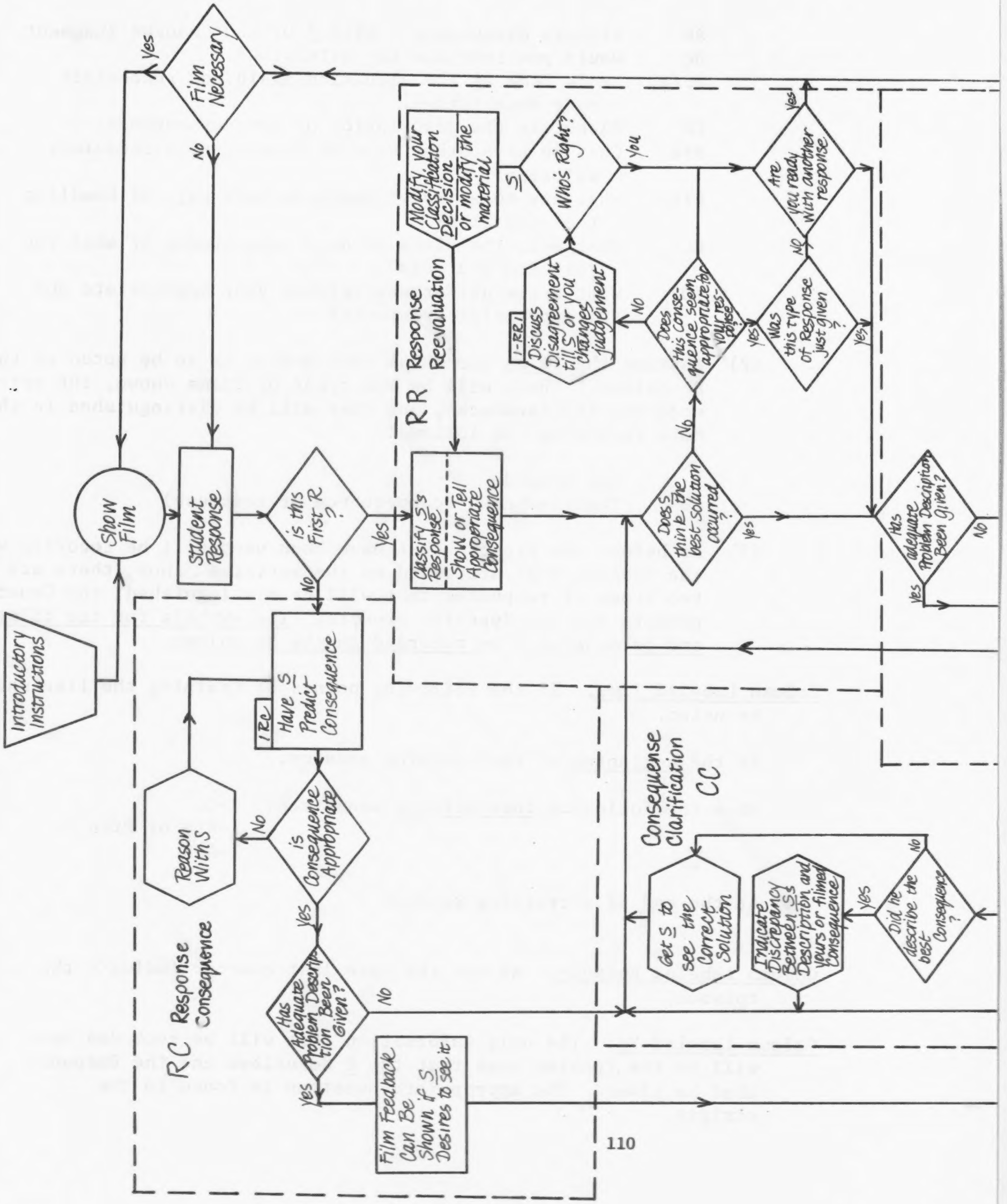
At the beginning of the training session.

When the following instructions are given: I-Dc
I-Rfa or Rfbc
I-KOS

At the end of a training session

Column Labeled Episode: As was the case last quarter indicate the episode.

Column Labeled Rs: The only information that will be recorded here will be the Problem cues that the *S* describes and the Response that he gives. The appropriate notation is found in the scripts.


Introductory Instructions
Show Film
Film Necessary
Yes
No
Student Response
Is this First R ?
Yes
No
RC Response Consequence
1 Rc
Have S Predict Consequence
Is Consequence Appropriate
No
Reason With S
Yes
Has Adequate Problem Description Been Given?
Yes
No
Film Feedback Can Be Shown if S Desires to see it
RR Response Reevaluation
Classify S's Response
Show or Tell Appropriate Consequence
Modify your Classification Decision or modify the material
S
Who's Right?
You
1-RR1
Discuss Disagreement till S or you changes judgement
No
Does this consequence seem appropriate to your response?
Yes
No
Does S think the best solution occurred ?
Yes
Was this type of Response just given ?
Yes
No
Are you ready with another response
Yes
Has adequate Problem Description Been Given?
Yes
No
Consequense Clarification CC
Get S to see the Correct Solution
Indicate Discrepancy Between Ss Description and yours or filmed Consequence
Yes
Did he describe the best Consequence ?
No

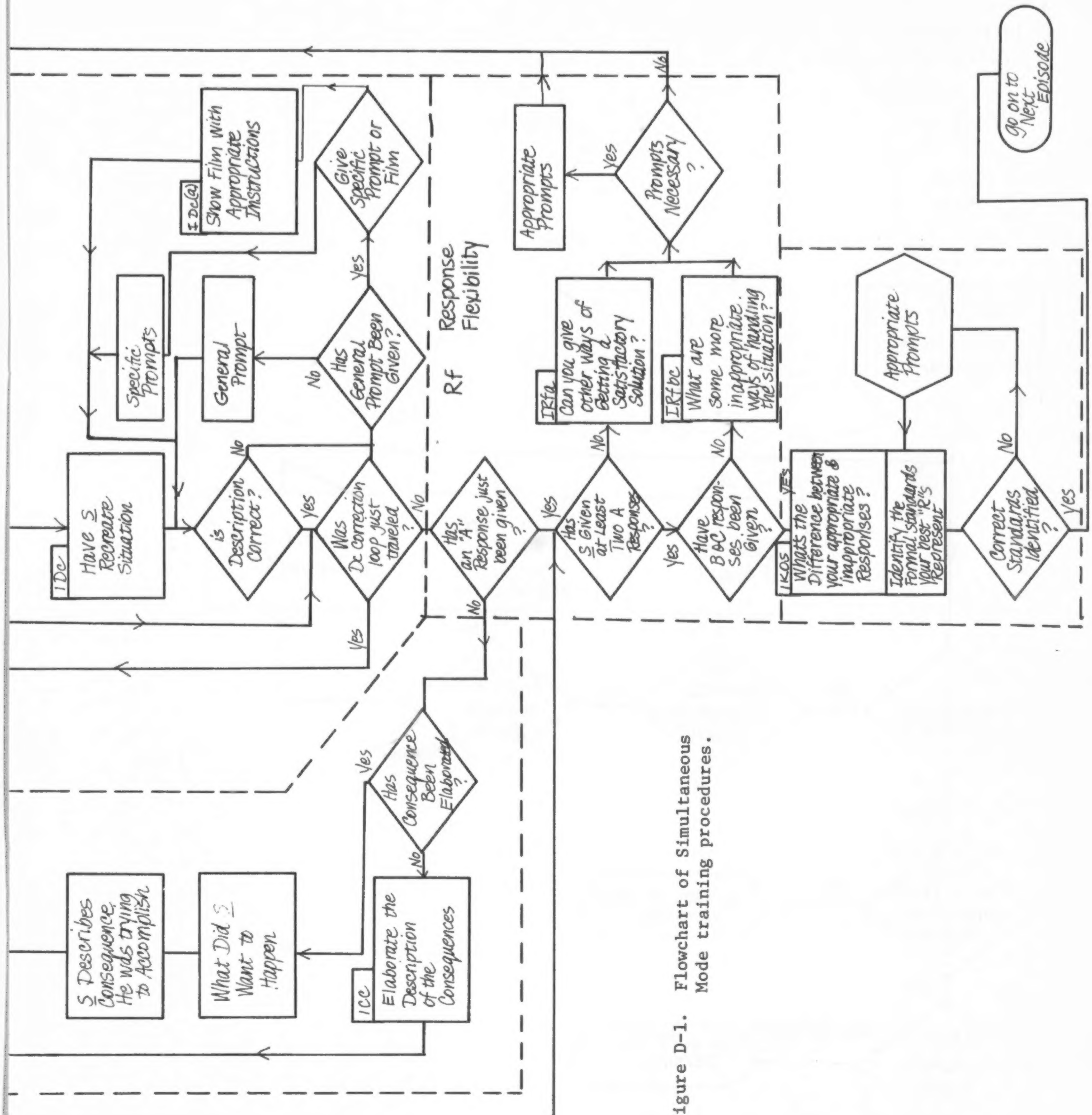

S Describes Consequence, He was trying to Accomplish
What Did S Want to Happen
ICc
Elaborate the Description of the Consequences
Has Consequence Been Elaborated?
No
Yes
IDc
Have S Recreate Situation
Is Description Correct?
Yes
No
Was Dc Correction loop just traveled?
Yes
No
Has General Prompt Been Given?
No
Yes
General Prompt
Specific Prompts
Give Specific Prompt or Film
IDc(a)
Show Film With Appropriate Instructions
Rf
Response Flexibility
Has an "A" Response just been given?
Yes
No
Has S Given at Least Two A Responses?
No
Yes
IRfa
Can you give other ways of Getting a Satisfactory Solution?
Have B&C responses been Given?
Yes
No
IRfbc
What are some more inappropriate ways of handling the situation?
Prompts Necessary?
Yes
No
Appropriate Prompts
IKOS
What's the Difference between your appropriate & inappropriate Responses?
Identify the Formal standards your best "R"s Represent
Correct Standards Identified?
No
Yes
Appropriate Prompts
go on to Next Episode

Figure D-1. Flowchart of Simultaneous Mode training procedures.

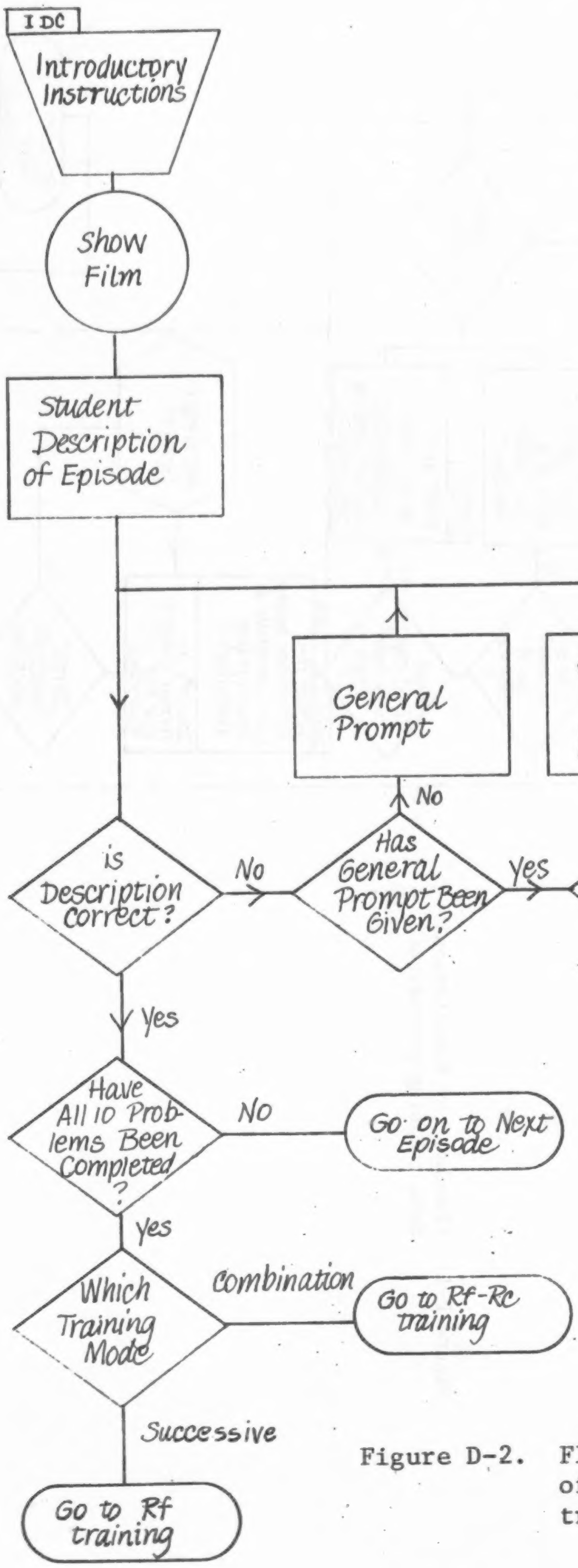
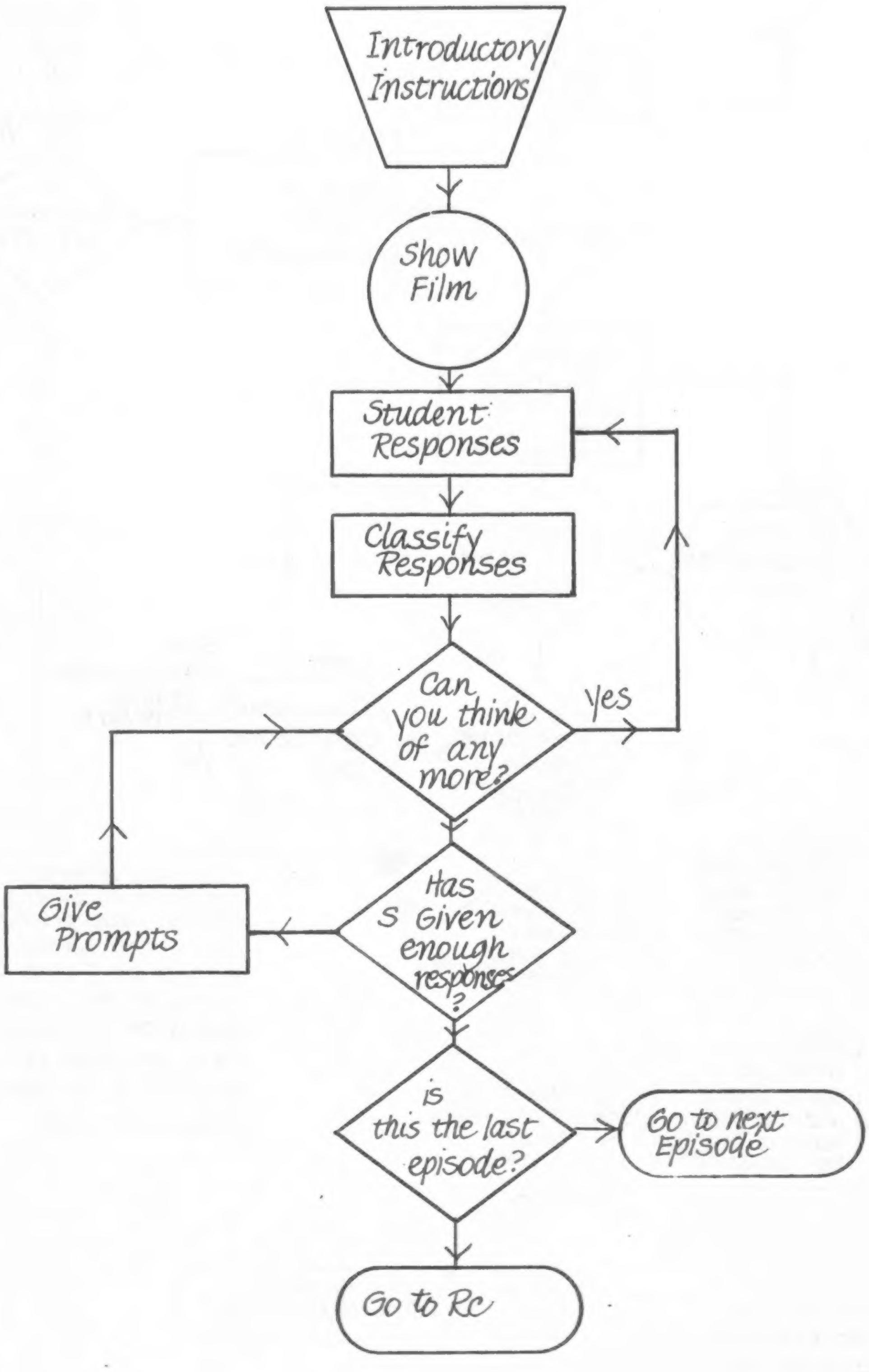
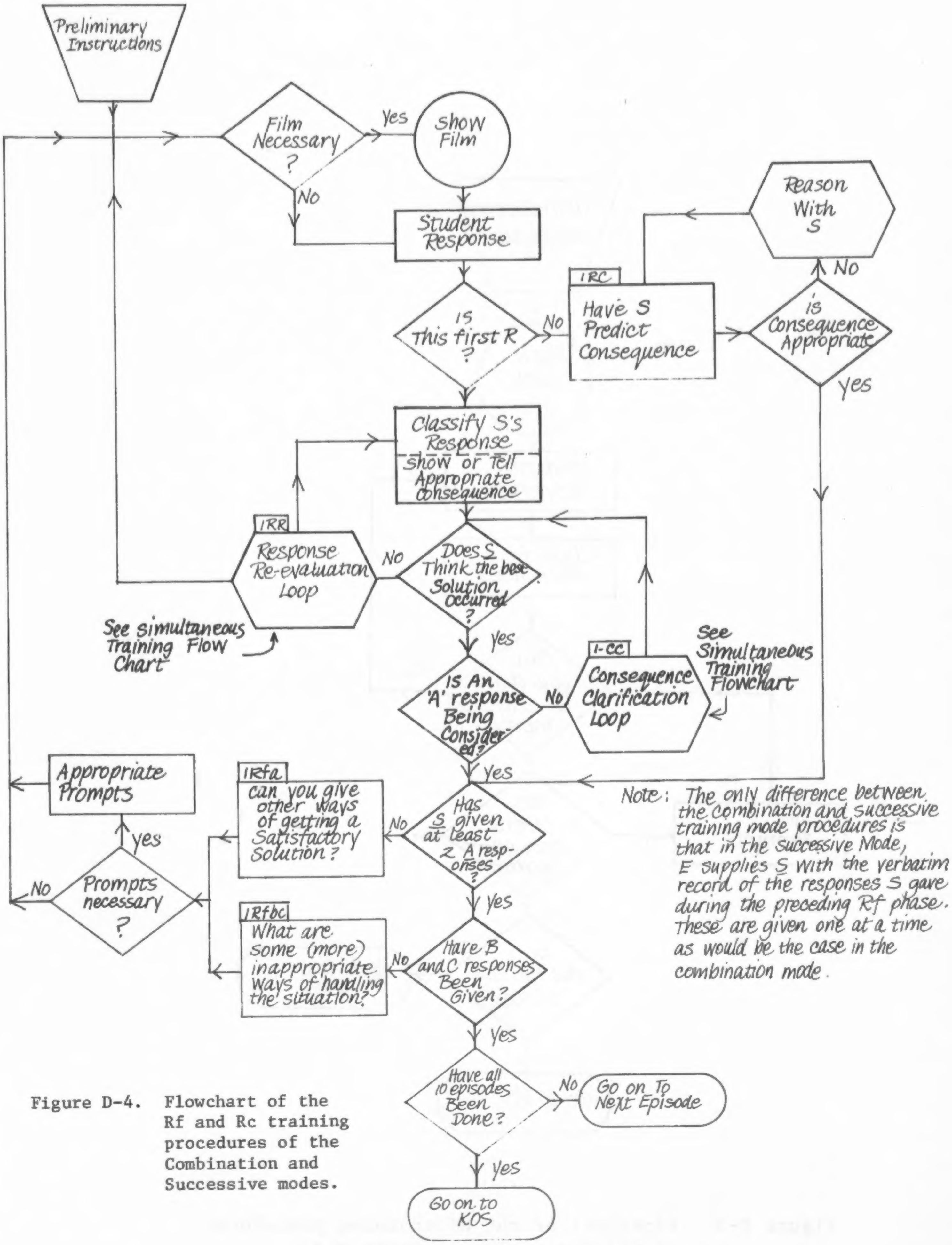

I DC
Introductory Instructions
Show Film
Student Description of Episode
General Prompt
Show Film with Appropriate Instructions
Specific Prompts
No
No
Is Description Correct?
No
Has General Prompt Been Given?
Yes
Has Film Been Shown Twice?
Yes
Yes
Have All 10 Problems Been Completed?
No
Go on to Next Episode
Yes
Which Training Mode
Combination
Go to Rf-Rc training
Successive
Go to Rf training

Figure D-2. Flowchart of Dc training procedures of the Combination and Successive training modes.



Introductory Instructions
Show Film
Student Responses
Classify Responses
Can you think of any more?
Yes
Has S Given enough responses?
Give Prompts
is this the last episode?
Go to next Episode
Go to Rc

Figure D-3. Flowchart of the Rf training procedures of the Successive training mode.


Preliminary Instructions
Film Necessary ?
Yes
No
Show Film
Student Response
IS This first R ?
No
IRC
Have S Predict Consequence
Reason With S
No
is Consequence Appropriate
Yes
Classify S's Response
Show or Tell Appropriate Consequence
IRR
Response Re-evaluation Loop
No
Does S Think the best Solution occurred ?
Yes
See simultaneous Training Flow Chart
I-CC
Consequence Clarification Loop
See Simultaneous Training Flowchart
Is An 'A' response Being Considered ?
No
Yes
Appropriate Prompts
yes
No
Prompts necessary ?
IRfa
can you give other ways of getting a Satisfactory Solution ?
No
Has S given at least 2 A responses ?
Yes
IRfbc
What are some (more) inappropriate ways of handling the situation?
No
Have B and C responses Been Given ?
Yes
Have all 10 episodes Been Done ?
No
Go on To Next Episode
Yes
Go on to KOS

Note: The only difference between the combination and successive training mode procedures is that in the successive Mode, E supplies S with the verbatim record of the responses S gave during the preceding Rf phase. These are given one at a time as would be the case in the combination mode.

Figure D-4. Flowchart of the Rf and Rc training procedures of the Combination and Successive modes.

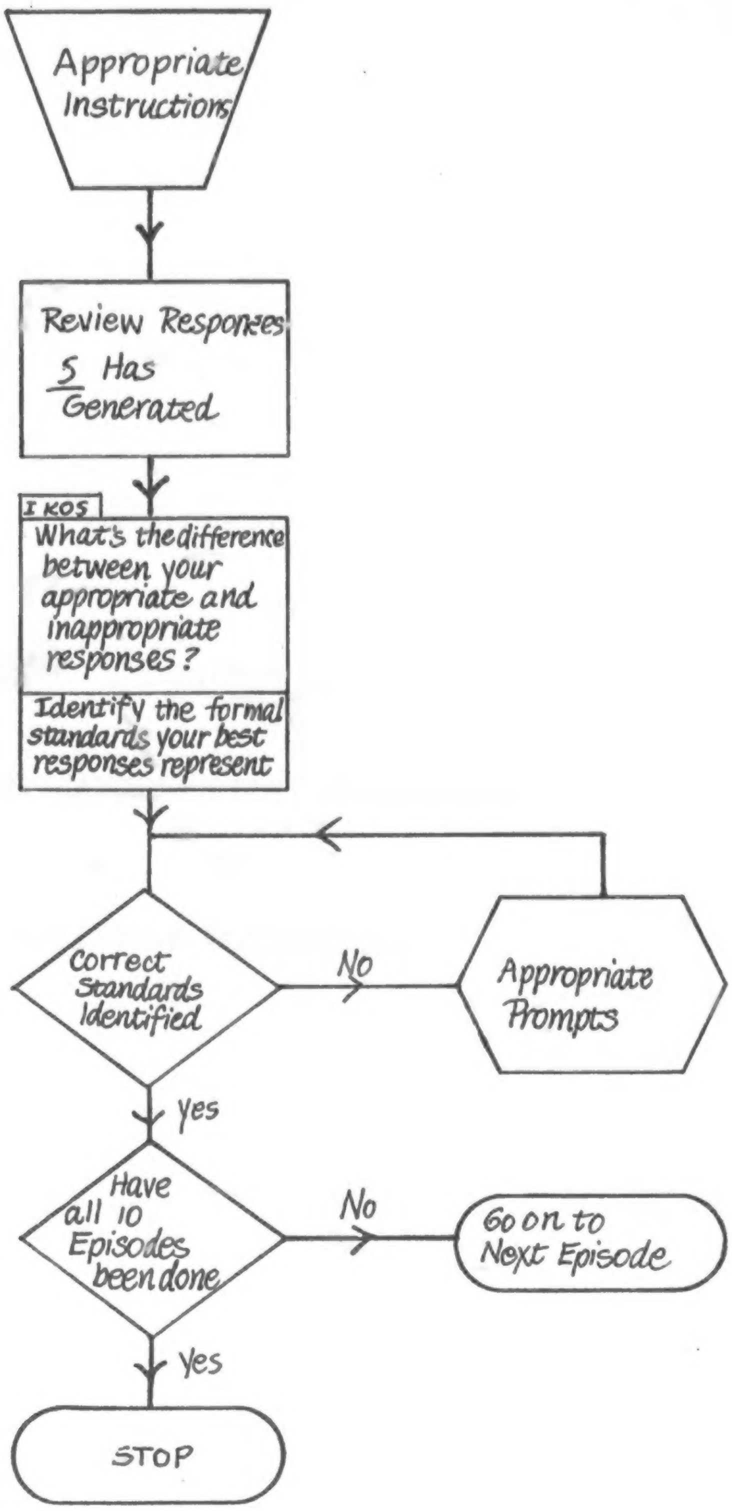

Appropriate Instructions
Review Responses S Has Generated
I KOS
What's the difference between your appropriate and inappropriate responses?
Identify the formal standards your best responses represent
Correct Standards Identified
No
Appropriate Prompts
Yes
Have all 10 Episodes been done
No
Go on to Next Episode
Yes
STOP

Figure D-5. Flowchart of the KOS training procedures of the Combination and Successive modes.

APPENDIX E

PROGRAMMED INSTRUCTIONAL TEST

OF

ORIENTATION MATERIALS

Classroom Simulation Project
Orientation Program

Classroom Simulation: An Orientation Program

Prepared by:

Fred A. Crowell

Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon

October, 1965

12/29/65

3

INSTRUCTIONS

The orientation material presented in this booklet is arranged in the form of a self-instructional program. This means that the material is arranged in a sequence of steps or frames, most of which require some type of response, either constructed or multiple choice. The program is designed to be used as follows:

(1) Use the mask which accompanies the program so that you move down each page from top to bottom.

(2) Expose only the material of one frame at a time, moving the mask down the page until you uncover the frame line which divides one frame from another.

(3) If the frame requests a response, record your response on the answer sheet provided for you.

(4) After responding, move the mask down to the next frame line, exposing the correct answer.

(5) Compare your answer with the correct one and if you gave the wrong answer, circle the frame number on your answer sheet.

(6) Proceed to the next frame unless you are "branched" to different frame, that is, instructed to go to a specific frame in the program, e.g., when an answer is followed by a frame number such as: "(a) class leader - frame 8," it means that you are to go directly to frame 8 if you select answer (a) as the correct answer (among the multiple-choice alternatives).

(7) Always turn to a photograph when requested to do so, e.g., "turn to photo #15." Following this procedure should help you to identify students by the time you have completed the program.

(8) Upon completion of the program, read the questions under "Criterion Test" and list your answer in the spaces provided on the answer sheet.

Corrections and criticism for the program: Classroom Simulation: An Orientation Program. As you work through the program please take note of any corrections or suggestions for improvement that you would make.

1. Typing and syntactical errors:

In Frame 2 - The Use of Cumulative Records, the blue card is not the elementary cumulative record - it is the school health record card. The pink card is the elementary cumulative record card.

2. Weak frames in terms of clarity of expression, etc.:

3. Miscellaneous suggestions for improving the program.

1. Introduction

This orientation program has the following primary objectives:

(1) to acquaint you with the cumulative record files on each of Mr. Land's students and the proper usage of these files.
(2) to enable you to identify each student by name and distinguish between the various members of the class.
(3) to enable you to identify specific role behavior associated with certain individuals in the class.
(4) to enable you to distinguish between the class members in terms of grade level performance and outstanding physical or behavioral problems.

The above objectives will be covered in the program in the following sequence of frames (program units):

(1) use of cumulative records: frame 2
(2) identification of students: total program
(3) identification of role behavior: frames 3-19
(4) grade level performance and problem areas: frames 20-65
(5) criterion tests and answer sheet: frame 66

2. Use of Cumulative Records

This programmed material logically follows the orientation tape-slide presentation which you have already received. You might conceive of a conversation with Mr. Land following that presentation in which you would be asked some questions about the students and given additional information by Mr. Land.

For example, Mr. Land might begin the discussion with the following remarks: "For each of the students you observed in the class there are three records containing information about the student which should be helpful to you in your simulation experiences. Select one of the 22 sets of records and examine the three cards carefully. You'll note that the blue card is the student's elementary cumulative record. This card contains information regarding attendance, tests scores and classroom attitudes. Any questions concerning grade level performance could be resolved by attending to the figures on the lower left side of the card generally listed under the heading of "Iowa Test."

The figures indicate whether or not the student is above, at, or below his particular grade level. For example, if a 5.2 figure has been recorded for a student for the reading area, he would be performing below grade level if he were in the 6th grade at the time of the test.

Now look at the pink card. The pink card is the health record containing remarks about the physical deficiencies of the student.

The third and final type of card is the teacher's planning and summary sheet (yellow or buff colored card). This card differs from the other two objective records in being a more subjective type of evaluation on the part of the teacher. The teacher's planning and summary sheet (TPSS) would be most relevant to questions regarding the strengths and weaknesses of each student in terms of social and emotional behavior.

Now that you are familiar with these three kinds of records, let's see how well you are able to use them, along with the panel of photographs accompanying this program, in learning to identify the important characteristics of the students in the class.

---

3. Description of Role Behavior

If you recall from the orientation tape-slide presentation, Shirley (see Photo #18) likes to have things in their proper place: she puts things away, straightens up desks and sometimes neglects her own school work in the process. Because of this "worry-wart" behavior Shirley has acquired the label of: (select one).

a. teaser
b. room clown
c. room mother

---

4. The correct answer, of course, is (c) room mother.

---

5. Turn to photo #15.

Chuck has a number of problems which you will become familiar with after reviewing his records. By looking at his health record you'll note several problems such as overweight and poor ________________.

---

6. Poor coordination is the correct answer.

---

7. These problems coupled with his social immaturity have combined to cast Chuck in the role of:

a. class leader - frame 8
b. class clown - frame 9
c. room mother - frame 11

---

8. Chuck as class leader? Not hardly. Return to frame 7 and try atain.

---

9. Right! Chuck is regarded as the class clown. (You can remember his role by CCC = Chuck Class Clown.

---

10. Look at photo #12

Greg is very popular with his classmates and a good student with no social or physical problems. Look at his records and select the most appropriate role description from the following:

a. natural leader
b. trouble maker
c. teaser

Go to frame 12

---

11. You must have made some mistake in selecting "c" or else you didn't read very carefully since Chuck and "room mother" obviously do not belong together. Go back and try again!

---

12. Natural leader (a) is correct

---

13. Turn now to photo #22

If you were asked to characterize Terry's class behavior in one or two words, what would they be? (Consult appropriate record in Terry's folder as an aid in formulating your answer).

---

14. Either teaser or puppy dog or a similar type response would appropriately describe Terry's role in the class. Again the use of first letters may help you in recall: Terry the teaser (TT).

---

15. Below are photo numbers of 4 students who have definite roles in the class. Match each photo with the correct "role behavior" label.

a. photo #18
b. photo #15
c. photo #22
d. photo #16

1. class clown
2. little professor
3. room mother
4. teaser

---

16. The correct is:

a. Shirley - (3) room mother
b. Chuck - (1) class clown
c. Terry - (4) teaser
d. Ron - (2) little professor

---

17. Turn to photo #17

Danny is above average in most respects. Look at his TPSS record and decide which label is most appropriate for Danny.

a. teacher's pet
b. rugged individualist
c. most popular
d. natural leader

---

18. b. rugged individualist best describes Danny's behavior.

---

19. Now that you are familiar with the main roles that are important for you to remember, we'll proceed to the descriptive material on test performance and problem behaviors.

---

19. Now that you are familiar with the main roles that are important for you to remember, we'll proceed to the descriptive material on test performance and problem behaviors.

---

20. Grade Level Performance and Problem Areas

Performing below grade level in one or a number of areas, a student may present management or communication problems to the teacher. Physical limitations and social or emotional immaturity might also contribute to the creation of these problems. The information presented in the subsequent frames should help you identify and react to classroom problems in your simulation experience.

For example, Jack (#3) creates problems due to his attention-getting behavior. He also has other limitations as described in his records. Look at these and list the two most important deficiencies.

---

21. Jack's below grade level performance and emotional outbursts are his two greatest handicaps in class.

---

22. Ron (#16), as you recall, is the little professor who reads extensively and functions above grade level in all areas. He has a physical problem, however, which according to his record is a:

a. hearing problem
b. vision problem
c. coordination problem
d. speech problem

---

23. Coordination problem is correct as his health record indicates.

---

24. Read the following description and decide, after consulting their folders, which boy, Greg or Larry, is being described:

He is popular with his classmates, has the qualities of a leader, is a good student with only one problem: inattention. His name is:

a. Greg - frame 25
b. Larry - frame 26

---

25. Greg fits the description in all respects but one: he is not inattentive. You missed this characteristic of Larry's by not comparing their health records.

26. Good! Larry is the inattentive one (photo #5; Greg is #12).

27. Look at photo #10.

Brian has a number of problems. He functions below his grade level, has a minor speech defect and a very short attention span. Compare his records with Bob's and select the student who is potentially the most disruptive in a classroom situation.

a. Brian (#10)
b. Bob (#21)

28. a. Brian. You're right.

29. Since you've just examined Bob's records you should be able to state that Bob is functioning________his grade level.

a. at
b. above
c. below

30. Above is correct.

31. Below are the names of 4 students. Two of these students function below their grade level in all areas. List the names of these two students.

a. Jack (#3)
b. Greg (#12)
c. Chuck (#15)
d. Brian (#10)

---

32. Your list should include: Jack and Brian. Look at photo #13 (Carol) and photo #22 (Terry). These two students also perform below grade level in all areas.

---

33. Of the remaining 18 students, 4 are functioning below grade level in one area. For example, look at Mona's blue record under the Iowa test heading for grade six. The only score below 6.0 is the 5.6 score for arithmetic. This score indicates a below 6th grade performance in math.

34. The other 3 students who are having difficulties in only one area are listed below with their problem areas in scrambled order. Match each individual with the correct area.

1. Chuck (#15)	a. language skills
2. Yvette (#4)	b. reading
3. Randy (#11)	c. math

---

35. The correct match is:

1. Chuck	a. language skills
2. Yvette	c. math
3. Randy	b. reading

---

36. Under what conditions do you feel that Randy's poor performance in reading would create a problem? State your answer in your own words - be brief and to the point.

---

37. Randy might exhibit restlessness or talk to a neighbor during a reading lesson or during any task which required reading skills.

---

38. Below are 3 photos. Select the one student who is not an underachiever (below grade level) in any area:

a. photo #6
b. photo #3
c. photo #8

---

39. The girl in photo "C", Karen, is the correct answer.

---

40. The other two, Mona and Jack, have one or more areas of difficulty. Karen wears glasses but so does one other girl in the class. Her photo is #4 and her name is ______________________.

---

41. Her name is Yvette.

---

42. Below are the names of three students, only one of which is functioning below grade level. Which girl is the under-achiever?

a. Karen (#8)
b. Wendy (#9)
c. Carol (#13)

---

43. Right! Carol (#13) is the only girl in the class who is below grade level in all areas.

---

44. The other 3 under-achievers you'll recall are all boys. Try to select their photos among the 5 listed below:

a. photo #3
b. photo #5
c. photo #10
d. photo #22
e. photo #7

---

45. The under-achievers are A (Jack), C (Brian), and D (Terry). Photo B is Larry and E is Keith, both of whom function above grade level.

---

46. At this point in the program you should be able to categorize each under-achiever in the classroom and come up with 2 main groupings:

Below grade level	Below-one area
Jack	Mona
Carol	Yvette
Brian	Randy
Terry	Chuck

---

47. The correct groupings are below:

Below grade level	Below-one area
Jack	Mona
Carol	Yvette
Brian	Randy
Terry	Chuck

---

48. Being an above grade level student does not automatically insure the student that he or she will have a problem-free environment. For example, Donna (photo #2) functions above her grade level but at this point in her development she is vacillating between two age groups, the teen-ager and grade-schooler.

In your own words, describe any problems that might arise in the classroom between you and Donna as a result of her vacillating behavior.

---

49. If your answer contains some reference to indecision or conflict regarding the predictability of Donna's behavior, you are right. Donna is caught in a conflict of roles and the normative behaviors associated with those roles.

---

50. The four students listed below have something in common that you should recall when interacting with them in a classroom. All 4 students have:

Yvette (#4)
Keith (#7)
Chuck (#15)
Ron (#16)

a. emotional problems
b. poor coordination
c. above grade level performance
d. speech defects

---

51. The 4 students, Yvette, Keith, Chuck and Ron all have poor coordination.

---

52. Some of the members of the class can be distinguished from the others on the basis of their quiet, "No problem" behavior. These students have not been mentioned to any extent in this program so far. Which of the following students fall in that category?

a. Linda
b. Karen
c. Suzanne
d. Sarah
e. all of these
f. none of these

---

53. All 4 of them is correct.

---

54. Many classroom activities concern reading skills. The only student, you'll recall, who has a reading problem is: ____________________.

---

55. Randy (Remember Randy and Reading, RR).

---

56. Look at photos #16 and #11. Which one is a photo of Randy?

---

57. Randy is in photo #11 (#16 is Ron).

---

58. As you recall from earlier frames, Chuck has a number of characteristics which may lead to problem behaviors in the classroom. Which one of the following is not descriptive of Chuck:

a.	class clown	frame 59
b.	overweight	frame 60
c.	poor coordination	frame 61
d.	speech defect	frame 62
e.	deficient in language skills	frame 64

---

59. Your answer of class clown signifies that you failed to read the question carefully (note the word not) or else you have forgotten that Chuck is the classclown (remember CCC).

Return to frame 58 and select a different alternative.

---

60. Overweight is not the correct answer. Perhaps you misread the question. If you had forgotten that Chuck was overweight you could have consulted his health record.

Return to frame 41 and select a different alternative.

---

61. If you had profited from frames 50 and 51, you would not have selected poor coordination as the answer. It is possible, however, that you read the frame too hurriedly and failed to take note of the "not" part of the question.

Return to frame 58 and select a different answer.

62. Good! Speech defect is not one of Chuck's problems.

63. The only student who has a speech problem is shown in photo #10. His name is ________________.

Go to frame #65.

64. "e" is not correct since Chuck is deficient in the language area. You may have misread the question. Why not return to frame 58, reread it carefully and select another answer.

65. Brian is correct.

66. The remaining section of the program constitutes a criterion test, an assessment of what you have learned by using this program. Answer each question on your answer sheet without reference to the folders (except when instructed to do so) or earlier parts of the program. When you have completed the test compare your answers with the correct answers listed on the answer sheet following the test.

CRITERION TEST

1. The more subjective-type record in each student's folder is called the ____________________________.

2. Information on the grade level performance of a student is located on the lower left-hand corner of the ____________________card.

3. What is the name of the student in photo #3?

4. Photo #2 is a photograph of:

   a. Donna
   b. Karen
   c. Sarah
   d. Jackie

5. Match the following photos with the appropriate names:

   1. #6
   2. #1
   3. #10
   4. #21

   a. Brian
   b. Bob
   c. Mona
   d. Linda

6. The role of class clown is associated with:

   a. Keith
   b. Chuck
   c. Randy

7. Match the following names and role descriptions:

   1. Terry
   2. Greg
   3. Danny
   4. Ron

   a. rugged individualist
   b. natural leader
   c. little professor
   d. teaser (puppy dog)

8. The student in photo #18 is___________(name) and she has the role of_______________.

9. Most of Mr. Land's class are above garde level in all areas. Which one of the following students does not belong in that group?

   a. Ron
   b. Shirley
   c. Greg
   d. Carol
   e. Wendy

10. Performance at grade level except in language skills, poor coordination, social immaturity and overweight best characterize which student?

11. Two girls are characterized by a below grade level performance in math. Their names are:

    a. Donna and Karen
    b. Yvette and Mona
    c. Sarah and Jackie
    d. Wendy and Suzanne

12. A minor speech defect, short attention span and below grade level functioning would all tend to produce classroom problems for which student?

13. Which student has a reading problem?

14. Donna's main problem is one of:

    a. emotional outbursts
    b. restlessness
    c. role conflict

15. Which of the following students function below grade level in all areas?

    a. student #22
    b. student #7
    c. student #5

ANSWER SHEET

1. Teacher's planning and summary sheet.

2. blue

3. Jack

4. a. Donna

5. 1. c. Mona
   2. d. Linda
   3. a. Brian
   4. b. Bob

6. b. Chuck

7. 1. d.
   2. b.
   3. a.
   4. c.

8. Shirley; room mother

9. d. Carol

10. Chuck

11. b. Yvette and Mona

12. Brian

13. Randy

14. C.

15. A. (Terry)

REVIEW SUGGESTIONS

This concludes the orientation program. It is suggested that specific parts of the program may be reviewed if you encountered difficulty in answering any of the questions. Specifically, if you made errors on:

questions 3-8, review frames 3-19,
questions 9-15, review frames 20-65.

Errors on questions requiring identification of photos (by name) should lead you to review the total program until you can identify each student by name.

APPENDIX F

RETENTION TEST INSTRUCTIONS

Classroom Simulation Project
Teaching Research Division
Monmouth, Oregon
May, 1966

Simulation Retention Test
Instructions

General Instructions.

These instructions pertain to the administration of the group administration of the Classroom Simulation Posttest. During this research it will be Program D* that will be used as the Retention Posttest.

All Ss will receive the following three items:

A. A page containing the description of the eight episodes used in the retention test.

B. A page containing the Standards for Teacher Behavior

C. An answer form consisting of eight pps.

Directions to the Ss.

1. You will write out your responses like you did on the Pretest some time ago.

2. As your first Response give the best one that you can think of.

3. Then give two additional responses. Make the 2nd one a very poor one and the 3rd one intermediate between your best and your worst response.

4. Describe adequately what the problem is that the film portrays. You do not have to write out all three responses before you describe the problem. It may be described after you write out the 1st response or the 2nd response.

5. Finally, from the 5 alternative standards presented, chose the one or two that are most relevant.

---

*Obviously we will use Program C this Spring. It will be used because it was the pretest last quarter.

6. You will have a total of 5 minutes to complete all of the above and then be ready for the next episode.

7. Now we will begin and read together the first episode.

Directions to the E.

Continue to read along with the Ss the episode descriptions.
Comparing the 8 episodes of this retention test with the full 16 episodes of Program C you will find the Episodes you will show from the original set of 16 are as follows: 2, 3, 4, 7, 8, 11, 12, 13. So move the film forward after episodes 4 and 8, while the Ss are writing, to save time.

APPENDIX G

DESCRIPTION AND EXPLANATION OF COGNITIVE AND PERSONALITY TESTS

Explanation of Factors in
ETS Cognitive Test Battery

Speed of Closure: Gestalt Completion Test. Cs-1

The ability to unify an apparently disparate perceptual field into a single percept is tested. Drawings are presented which are composed of black blotches representing parts of the objects being portrayed. The subject writes down the name of the objects, being as specific about them as he can.

Syllogistic Reasoning: Inference Test. Rs-3

Tests the ability to reason from stated premises to their necessary conclusions. The task is to select the one of five conclusions that can be drawn from each given statement.

Induction: Locations Test. I-2

Associated abilities involved in the finding of general concepts that will fit sets of data, the forming and trying out of hypotheses. For each item, five rows of places and gaps are given. In each of the first four rows one place in each row is marked according to a rule. The task is to discover the rule and to mark one of the five numbered places in the fifth row accordingly.

Spatial Scanning: Maze Tracing Speed Test. Ss-1

Speed in visually exploring a wide or complicated spatial field. The task is to find and mark an open path through a moderately complex series of paper mazes.

Perceptual Speed: Identical Pictures Test. P-3

Speed in finding figures, making comparisons, and carrying out other very simple tasks involving visual perception. For each item the subject is to check which of five numbered geometrical figures or pictures in a row is identical to the given figure at the left end of the row.

Visualization: Paper Folding Test. Vz-2

The ability to manipulate or transform the image of spatial patterns into other visual arrangements. For each item successive drawings illustrate two or three folds made in a square sheet of paper. A drawing of the folded paper shows where a hole is punched in it. The subject selects one of five drawings to show how the sheet would appear when fully opened.

Ideational Fluency: Topics Test. Fi-1

The facility to call up ideas wherein quantity and not quality of ideas is emphasized. The task is to write as many ideas as possible about a given topic. The score is the number of separate ideas (phrases or sentences) written.

Figural Adaptive Flexibility: Match Problems. Xa-2

The ability to change set in order to meet new requirements imposed by figural problems. The task is to indicate several different patterns of matches that can be removed to leave a specific number of squares. Many set-breaking solutions are needed.

Originality: Plot Titles (clever). O-1

The ability to produce remotely associated, clever, or uncommon responses. The task is to write titles for story plots. The score of O-1 high, is the number of highly original titles written. O-1 low is the number of titles of low originality written.

Explanation of Variables in the
Edwards Personal Preference Schedule

1. Achievement (ach): To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. Deference (def): To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. Order (ord): To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. Exhibition (exh): To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. Autonomy (aut): To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. Affiliation (aff): To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

7. Intraception (int): To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

8. Succorance (suc): To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. Dominance (dom): To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. Abasement (aba): To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. Nurturance (nur): To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. Change (chg): To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new and different things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. Endurance (end): To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. Heterosexuality (het): To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. Aggression (agg): To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

16. Consistency (con): Reliability of answering.

APPENDIX H

DETAILED DESCRIPTION OF THE CLASSROOM EVALUATION PROCEDURES

Classroom Evaluation Procedures*

Originally it was anticipated that the procedure for evaluating the effect of Classroom Simulation on student teaching performance would be based upon preliminary follow-up studies underway at the Teaching Research Division by Bert Kersh and at Michigan State University by Charles Vlcek (1965). When all of the results utilizing these observational procedures were finally evaluated, it was decided that these techniques were inadequate.

Kersh's instrument (see Kersh, 1965, Appendix) consisted of a 15-item questionnaire, completed by the supervising teachers, concerning the student teacher's ability to implement the rules and principles of student teaching behavior that supposedly were practiced during the Classroom Simulation training. The supervising teachers were asked to estimate the frequency of occurrence of: (1) problems and (2) applications of each of these rules and principles. They responded, by checking on a 5-point scale ranging from very often to never, their estimate of the frequencies of occurrence during student teaching. No differences were found between the ratings of Ss who had simulation training and those who did not. It was perceived that the task that the teachers were asked to engage in, in order to judge the behavior of their Ss, was much too demanding. Excessive recall was required allowing uncontrollable error.

The Classroom Observational System developed and utilized by Vlcek in his research, considered overall, provides some useful data. However, it was felt that too many demands were made of the observers. They were required to make too many judgments in conjunction with the recording of the classroom behavior. They observed behaviors and interactions but only recorded the summaries of their evaluations of such behaviors and interactions. In addition, it appears that many of the judgments were subjective or at least the instructions and training given to the observers, were inadequately reported.

Because of the inadequacies perceived in the Kersh and Vlcek procedures it was decided that a search should be made for more detailed evaluation procedures. Eventually the Ryans Classroom Observation Record of the Teacher Characteristics Study was chosen to be the instrument which the cooperating teacher would be asked to use to evaluate the trainee in her class. No classroom observational system that had been developed and reported in the literature was found to be better than the one developed by Vlcek. Other systems that had been developed, such as Flanders' system, did not begin to measure the classroom behaviors and interactions upon which the Classroom Simulation training was hypothesized to have an effect. Therefore it was decided to develop a procedure that would record in detail data felt to correspond to the training objectives. Each procedure is described in detail below.

---

* Prepared by Dr. John R. Pyper.

Classroom Management Observation System

A basic objective of the observation system that was developed from the initial efforts of Vlcek was that of reducing the number of sequential internal decisions the observers must make before a tally mark is made on the record form. This change presumably would reduce error and subjectivity. The behaviors and interactions to be evaluated were much the same as the ones that were basic to Vlcek's system.

As noted by Vlcek there were five types of student initiated disruptions of the learning process used in the problem episodes of Classroom Simulation. These are:

1. Inattention
2. Baiting and Testing
3. Disorderly conduct
4. Distracting behavior
5. Fatigue

There were 11 principles of student teacher behavior involved in the solutions to these problems that were taught to Ss during simulation training. However, the training films used in conjunction with this project did not involve principles 1, 3, 4, 6 or 11 (see Appendix A for the principles). Vlcek's observers had to know all the problem types and principles, note the occurrence of problems, remember these problems if they extended over an appreciable length of time, note the principles used by the student teacher in resolving the problem and finally note the effectiveness of the student teacher's behavior.

In preliminary observations of the student teaching situations observed for this investigation, it was found that there was very little fatigue, baiting, and testing or disorderly conduct. It was decided that all of the student behaviors could be subsumed under one general category of disruptive or inattentive behavior. Accordingly five subcategories were distinguished:

Di = Individual disruption or inattention

Dim = Multiple individual disruptions or inattention

Dl = Local disruption or inattention by two or more Ss together

Dlm = Multiple local disruptions or inattention

Dc = Disruption or inattention of the entire class or the majority thereof.

It was also decided that all of the principles of teacher behavior dealing with these disruptions involved either management or stimulation actions plus teacher movement at times. Accordingly these categories were incorporated into the observational system. (See Appendix I for a more complete description of these categories.) Observers recorded every three seconds on appropriate tally sheets the predominant behavior of the student teacher and students of these categories. Two columns were needed therefore, one in which to record teacher and one in which to record student behavior. The three-second interval was left blank if the behavior of students and/or teacher was not of one of these categories.

Utilizing this system, information was recorded from which evaluations could be made regarding the effectiveness of the teacher trainee. Overall comparisions of the effectiveness of groups of teachers can be made by comparing the amount of disturbance time, amount of management and stimulation time, number of disturbances and number of management and stimulation behaviors. The relevance of the management or stimulation activity to the disruptive activity can be assessed by determining if the level of management behavior matches the level of disruptive behavior (e.g., is a Di followed by an Mi rather than an Mc?). The effectiveness of management activities can be assessed by the amount of disruptive behavior that goes on after the student teacher has exercised a management or stimulation behavior.

The basic observational records were then reduced to frequency counts and cumulative time totals of the occurrences of each of the categories during the observational period. Also a dyad interaction matrix was formed from the basic observations. (See Appendix I, Figure 2.) The information from the matrix could then be subdivided and analyzed in a manner similar to the Flanders procedure. Six areas were identified. (See Appendix I, Figure 3.)

Observations during the developmental, observer training, and data collection phases fluctuated around a twenty-minute period. Due to restrictions on observer resources this was the maximum observation that could be made on students during the data collection period.

Reliability of Classroom Management Observation System. Initial attempts to determine inter-observer reliability were handicapped by the set produced by the inappropriate Scott technique utilized by Flanders as well as the inadequate information about classroom observation reliability procedures reviewed by Medley and Mitzel (1962). A search of the literature revealed that the most relevant alternative techniques were those developed by Cohen (1960), Cartwright (1956) and Person (1966). Finally it became clear that two types of reliability assessment procedures needed to be discriminated, namely intra-observation reliability and inter-observation reliability. The reliability procedures that Flanders describes assess the intra-observation reliability. This procedure has some advantages during the training of observers, as the areas of disagreement can be more precisely determined. However, it finally became clear that the data level to be used in the analysis of treatment effects of the different experimental conditions was also the level at which inter-rater reliability should be determined. Thus the interest shifted from intra-observation reliability to inter-observation reliability.

The analysis of variance procedure described by Winer was used to estimate the inter-rater reliability of the individuals who made observations during the spring quarter of the 1966-67 school year. The data was obtained from 20-minute observations made of cooperating classroom teachers in nearby elementary schools. Due to numerous procedural difficulties only 12 observations were obtained. A number of observations made of filmed and live classrooms could not be used as there was not sufficient management behavior to observe. The environment was either too regular or too controlled. It was impossible to obtain observations of the same population of student teachers that would later be observed. Conditions in the classroom of these teachers were the closest approximations that could be obtained.

The results of the analyses of the inter-rater reliability of each of the categories are as follows:

Category	Number of Occurrences	Total Time of Each Category
Si	I.O.	---
Sl	N.O.	---
Sc	N.O.	---
Mi	.611	---
Ml	.574	---
Mc	.759	---
Pt	.375	---
Di	.108	.145
Dim	.103	I.O.
Dl	.603	.544
Dlm	.691	.536
Dc	I.O.	I.O.

Note: I.O. = insufficient occurrences
N.O. = no occurrences

Table H-1. Summary of reliability coefficients of separate categories.

Some of these coefficients are quite low and none of them are very high, except for Mc. During training it was also noted that there was some difficulty discriminating adequately among some of the categories. Sometimes one observer would categorize a behavior as stimulation and the others would call it management. At other times there would be disagreements as to whether a given behavior was individual or local, local or multiple local, etc. Therefore, categories were added together and the reliabilities of these combinations determined.

Category	Number of Occurrences	Total Time of Each Category
Si+Sl	I.O.	---
Mi+Ml+Mc	.855	---
Si+Mi	.657	---
Sl+Ml	.576	---
Sc+Mc	.849	---
Si+Mi+Sl+Ml	.628	---
Sl+Ml+Sc+Mc	.885	---
Si+Mi+Sl+Ml+Sc+Mc	.887	---
Dim+Dl+Dlm+Dc	.808	.664
Si+Dim+Dl+Dlm+Dc	.757	---

Table H-2. Summary of reliability analysis of combined categories.

It is apparent that the stimulation behavior categories were relatively useless as there was little observation of these behaviors. Inasmuch as the collapsing of all the categories of S and M into one category produced the highest inter-rater reliability this procedure was used. Likewise it was found that the combination of the D categories produced the highest inter-rater reliability. Even though the addition of the Di observations reduced the reliability somewhat it was included in the data reduction procedure because of computational simplification.

Analysis of the inter-rater reliabilities of the sections of the interaction matrix produced the following results:

Category	Number of Occurrences
Sm→Sm	I.O.
Sm→D	I.O.
D→I	.81
D→Sm	.49
D-D	I.O.
D+D	I.O.

Table H-3. Summary of analysis of reliabilities of interaction matrix scores.

These results are indicative of a general problem that came to light when these observations were made; namely, that there were very few management problems in the observations that were made. Therefore most of these interaction categories never were of any value. The only one that produced a high reliability, the D→I category, is of minimal informative value.

The dependent variables that were finally used to determine if the simulation treatments made any difference in the classroom during the practice teaching of the trainees were:

1. Total S and M time
2. Total D time
3. Sum of the Si+Mi+Sl+Ml+Sc+Mc occurrences
4. Sum of all D occurrences

Data Collection Procedures of Classroom Management Observational System. Although it was noted above only four dependent variables of the classroom observation data were analyzed, all of the data described above was collected. Observations were made during the Tuesday morning visit of the Junior Block students to cooperating schools in the Dallas and Salem areas. The observations started after the fourth week of the term allowing Ss time to accustom themselves to the classroom. The selection of Ss to be observed on a given day was primarily determined by their schedules, as a major concern was to schedule as many 20-minute observations as possible for each observer in the 2-1/2 to 3 hour block of time available on Tuesday mornings. The observations continued until the next to the last week of the term. Ss were not necessarily informed of the time when they would be observed. In some cases they were but many times administrative difficulties precluded advance warning. Ss were told, however, to expect a visit sometime during the quarter.

The classroom observation procedure for evaluating teacher effectiveness developed by Ryans (1960) was selected to be used by the cooperating teachers in an evaluation of the trainees' performance during the participation experience. Letters were sent out at the beginning of the winter term during the 1966-67 school year to the cooperating teachers and principals explaining the Ryan Classroom Observational Record and requesting the participation of the teachers. Due to poor communication, additional explanation was given to the teachers in faculty meetings in order to alleviate anxieties and obtain their cooperation. However, at one school the teachers and principal decided not to cooperate. In view of these problems the instructions were "diplomatically" altered for the spring term, 1967. In addition an explanation was made in a faculty meeting at the beginning of the term and the letters were personally handed to the teachers. Cooperation was excellent. See Appendix I for a copy of the materials sent to the cooperating teachers. The teachers filled out this record while observing Ss during a half-hour period toward the end of the term. The record forms were returned by mail.

APPENDIX I

CLASSROOM MANAGEMENT OBSERVATIONAL SYSTEM

and

RYAN'S CLASSROOM

OBSERVATIONAL RECORD

CLASSROOM OBSERVATIONAL SYSTEM*
CODES AND CATEGORIES

TEACHER BEHAVIORS

Instruction	Any teacher behavior, verbal or non-verbal, directed to the students (Ss) that is relevant to the apparent instructional objectives.	
Ii	Instruction, individual. Any instructional behavior in which the T is dealing only with one child in such a way that the rest of the class or group is not involved and/or listening.	
Il	Instruction, local. Same as above, except that the attention of the teacher is directed specifically to a group (e.g. at a table in the class, to the exclusion of the rest of the class).	
Ic	Instruction, class. Same as above except that the attention of the teacher is directed toward the entire class. (Note the teacher can be talking to one child in the class but if it is in a tone of voice and of sufficient volume that the rest of the class is listening, then it is Ic and not Ii.)	
Stimulation	Any teacher behavior which stimulates a response when learner(s) appear disinterested or inattentive. Note that this behavior causes S(s) to do something consistent with objectives, which also causes the disinterested or disruptive S(s) action to have to stop.	
Si	Stimulation, individual	The same distinction between the individual, local, and class unit as described under Instruction pertains to this section.
Sl	Stimulation, local	
Sc	Stimulation, class	

---

* Developed by Dr. John Pyper

Management Any control message from the teacher, either verbal or non-verbal, that is intended to stop disruptive or inattentive behavior but is not necessarily related to the instructional content. (It is a desist technique.)

Mi	Management, individual	The same distinction between the individual, local, and class units as described under Instruction pertains to this section.
Ml	Management, local	
Mc	Management, class	

Position change Any major change in teacher's position which is required to control a disruptive group or individual. Do not include teacher change unless in connection with management or stimulation. (Pt)

STUDENT BEHAVIORS

Disturbance (Gross inattention or disinterest.) Any behavior of an S or Ss that indicates that they are definitely not paying attention to the instructional objectives. (Looking out a window does not necessarily mean the S is not paying attention to what is being said. Looking at the observers is not to be considered a disruptive event.)

Di	Individual disinterest. Inattention or disinterest of one S evidenced by specific attention being directed to an activity in conflict with instructional objectives (e.g. reading a book during a class discussion, counting holes in the ceiling, etc.) However amusing oneself during a discussion or teacher explanation is not necessarily disinterest. If there is any indication that the student is paying attention also to the teacher activity it is not to be marked as disinterest.
Dim	Multiple individual disinterest. Same as Di except there are different, separate, disinterested individuals.
Dl	Local disinterest. Disinterested or inattentive behavior by two or more students together such as talking to neighbor (about something other than the classwork), jabbing neighbor with pencil, etc.

Dlm	Multiple local disinterest. The occurence of two or more Dl's.
Dc	Class disruption. May or may not involve all members of class as initiators of disturbance but noise level or disruptive stimulus creates one of two conditions: (1) teacher is unable to communicate above noise level or (2) the visual observing response of the majority of the class are directed away from the teacher and toward the source of the disturbance.

Figure I-1

Classroom Management Observational System
Data Sheet

Explanation

T = Column in which teacher activity is recorded

Ss = Column in which student activity is recorded

Each box represents 3 seconds

Each double column represents 1 minute

Student______________ Grade & Subject______________ Observer______________ Date______________

T	Ss	T	Ss	T	Ss	T	Ss	T	Ss	T	Ss	T	Ss	T	Ss	T	Ss	T	Ss

Name________________________

	Ii	Il	Ic	Si	Sl	Sc	Mi	Ml	Mc	Pt	Di	Dim	Dl	Dlm	Dc	Σ
Ii																
Il																
Ic																
Si																
Sl																
Sc																
Mi																
Ml																
Mc																
Pt																
Di																
Dim																
D̄l̄																
Dlm																
Dc																
Σ																

Figure I-2. Data sheet for dyad interaction analysis of classroom management observation data.

Name________________

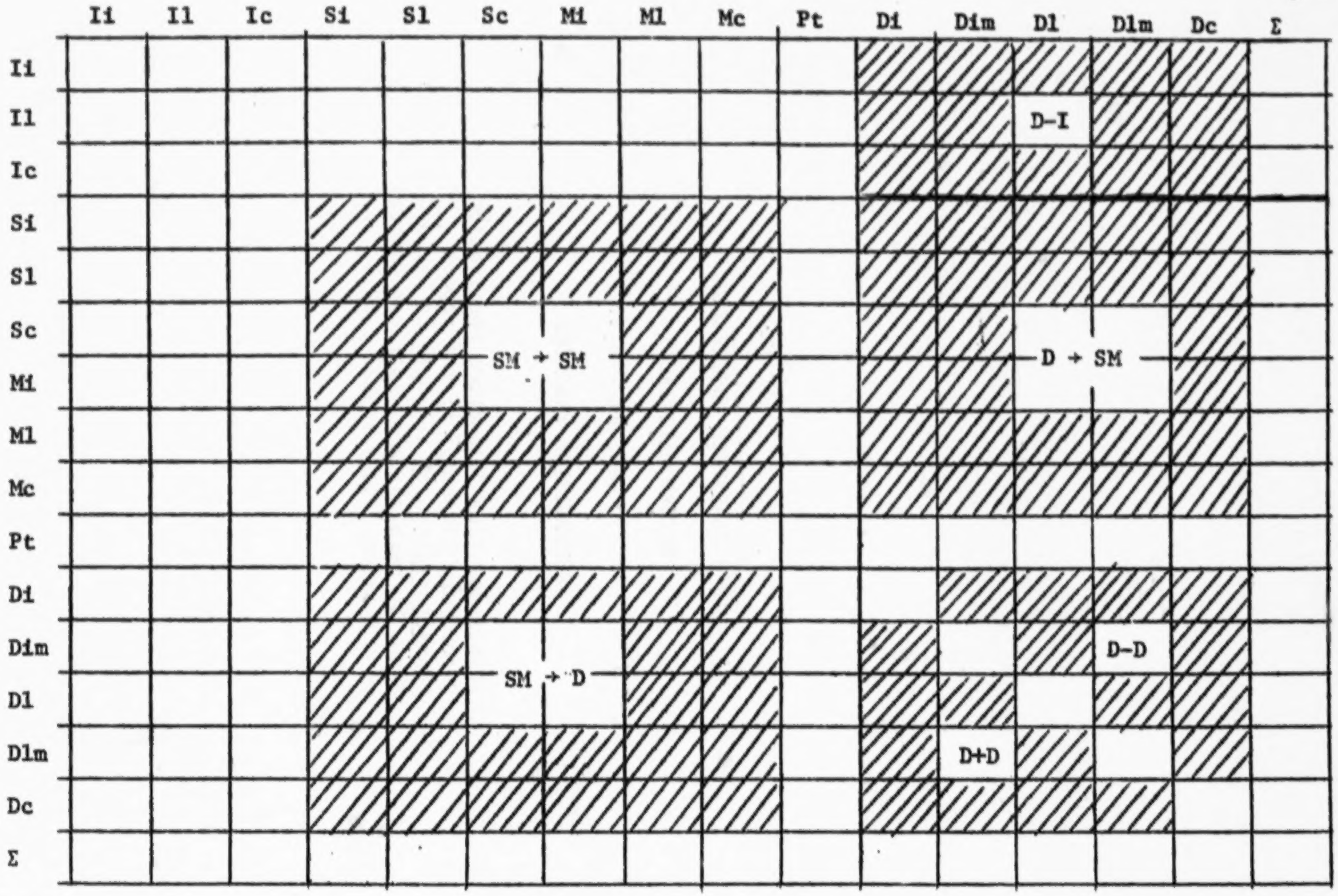

Ii
Il
Ic
Si
Sl
Sc
Mi
Ml
Mc
Pt
Di
Dim
Dl
Dlm
Dc
Σ
D–I
SM → SM
D → SM
SM → D
D–D
D+D

Figure I-3. Interaction areas of dyad interaction analysis of classroom management observations.

RYAN'S CLASSROOM OBSERVATION
RECORD MATERIALS
USED BY
SUPERVISING TEACHERS

(Reprinted from "Classroom Observation Record and Glossary" of the report Characteristics of Teachers by David G. Ryans by permission of American Council on Education. Copyrighted 1960.)

Classroom Simulation Project
Supervising Teacher Observation

Teaching Research Division
Monmouth, Oregon
March, 1967

Classroom Observation Record
Instructions

The Elementary Block students who are working with you this quarter participated in research with the Classroom Simulation Project last quarter at OCE. As part of the evaluation of our training procedures, we need to determine the effect of the different training methods on students' classroom teaching. In order to gain this information we will be observing the student teachers' performance. We would also appreciate your assistance in providing us with an additional observation from your point of view. In no way will these observations be used to grade the students. Rather we are evaluating our own procedures.

The observations and evaluations that we would like you to make are contained on the Classroom Observation Record, a copy of which, with Glossary, accompanies this information. We find that this procedure permits a penetrating measurement of teacher performance. We hope that you will not find this task of evaluating the student's performance too time consuming and that the Glossary will be most helpful in clarifying the meaning of the terms.

The following instructions have been prepared to explain the meaning of the scale values and how to mark each of them after you have made your evaluation of the student teacher's performance. In addition there are some guidelines to follow to help maintain a degree of uniformity from classroom to classroom. This will aid us in making the proper interpretation of the relationship between the student teachers' performance and his prior training.

1) Try to base your evaluations on observations that you will make during an instructional period of about 1/2 hour with the Elementary Block student teacher in charge of the entire class. This time should be one that is fairly representative of the student teacher's typical performance.

2) If the above is not feasible, would you please indicate on the Record Sheet, the teaching circumstances in which you did observe her (e.g., small group reading, team teaching, etc.)

3) Please fill out the Record at the conclusion of the observation of the student teacher.

4) *Do* circle the N if some behavioral dimensions are not observed by you. Sometimes they are just not relevant in a given situation.

5) Please read the Record and Glossary over as soon as possible. These words and the dimensions they represent will be clear to you when you make the evaluation in class.

6) Try to fill out this Record in such a way that the student teachers will be unaware of it in order that their teaching will not be affected by knowledge of the fact that this record is being made.

7) The Classroom Record consists of 22 seven point scales of which the extremes are identified by descriptive adjectives which are antonyms. The adjectives are illustrated and defined in the Glossary in order to help in improving the degree of understanding and agreement of these terms among different observers. The scale value that the observer chooses (1 through 7) is quite straightforward. Using the first dimension as an example (apathetic-alert):

If you felt that the behavior of the children was *extremely* apathetic during the period of observation you would circle the 1 as follows:

1. Apathetic [✓ 1] 2 3 4 5 6 7 N Alert

Conversely, if you felt that the students were extremely alert you would circle the 7.

1. Apathetic 1 2 3 4 5 6 [✓ 7] N Alert

If you felt that the students were no more characterized by one end of the scale than the other, *e.g.*, that they were no more apathetic than alert, then you would circle the mid point which is 4.

1. Apathetic 1 2 3 [✓ 4] 5 6 7 N Alert

The remaining values represent intermediate strengths of the extremes and can be described as follows:

1. Extremely (Apathetic, Obstructive, etc.)
2. Very much " " "
3. Somewhat " " "
4. Neutral (Neither one nor the other.)
5. Somewhat (Alert, Responsible, etc.)
6. Very much " " "
7. Extremely " " "

If you feel that some of these dimensions simply aren't relevant during the observation period because of the subject matter, the grade level or for some other reason you would circle the N indicating that the behavioral dimension was not observed.

Apathetic 1 2 3 4 5 6 7 [✓ N] Alert

8) Finally, we realize that this task will require time and effort on your part. We hope that this task will be interesting and rewarding. We appreciate your assistance in aiding our efforts towards the improvement of teacher education.

CLASSROOM OBSERVATIONAL RECORD

Student Teacher__________ Class or subject____________ Date___________

Lesson: Type____________ Length____________ Observer_______________

(Circle N if Scale is Not Appropriate For the Class and/or Teacher.)

PUPIL BEHAVIOR			REMARKS
1. Apathetic	1 2 3 4 5 6 7 N	Alert	
2. Obstructive	1 2 3 4 5 6 7 N	Responsible	
3. Uncertain	1 2 3 4 5 6 7 N	Confident	
4. Dependent	1 2 3 4 5 6 7 N	Initiating	
TEACHER BEHAVIOR			
5. Partial	1 2 3 4 5 6 7 N	Fair	
6. Autocratic	1 2 3 4 5 6 7 N	Democratic	
7. Aloof	1 2 3 4 5 6 7 N	Responsive	
8. Restricted	1 2 3 4 5 6 7 N	Understanding	
9. Harsh	1 2 3 4 5 6 7 N	Kindly	
10. Dull	1 2 3 4 5 6 7 N	Stimulating	
11. Stereotyped	1 2 3 4 5 6 7 N	Original	
12. Apathetic	1 2 3 4 5 6 7 N	Alert	
13. Unimpressive	1 2 3 4 5 6 7 N	Attractive	
14. Evading	1 2 3 4 5 6 7 N	Responsible	
15. Erratic	1 2 3 4 5 6 7 N	Steady	
16. Excitable	1 2 3 4 5 6 7 N	Poised	
17. Uncertain	1 2 3 4 5 6 7 N	Confident	
18. Disorganized	1 2 3 4 5 6 7 N	Systematic	
19. Inflexible	1 2 3 4 5 6 7 N	Adaptable	
20. Pessimistic	1 2 3 4 5 6 7 N	Optimistic	
21. Immature	1 2 3 4 5 6 7 N	Integrated	
22. Narrow	1 2 3 4 5 6 7 N	Broad	

From Ryans, D., "Teacher Characteristics Study"; reproduced with permission of the American Council on Education.

GLOSSARY

(To be used with classroom observation record.)

Pupil Behaviors

1. Apathetic-Alert Pupil Behavior

Apathetic

1. Listless.
2. Bored-acting.
3. Enter into activities halfheartedly.
4. Restless.
5. Attention wanders
6. Slow in getting under way.

Alert

1. Appear anxious to recite and participate.
2. Watch teacher attentively.
3. Work concentratedly.
4. Seem to respond eagerly.
5. Prompt and ready to take part in activities when they begin.

2. Obstructive-Responsible Pupil Behavior

Obstructive

1. Rude to one another and/or to teacher.
2. Interrupting; demanding attention; disturbing.
3. Obstinate; sullen.
4. Refusal to participate.
5. Quarrelsome; irritable.
6. Engaged in name-calling and/or tattling.
7. Unprepared.

Responsible

1. Courteous, co-operative, friendly with each other and with teacher.
2. Complete assignments without complaining or unhappiness
3. Controlled voices.
4. Received help and criticism attentively.
5. Asked for help when needed.
6. Orderly without specific directions from teacher.
7. Prepared.

3. Uncertain-Confident Pupil Behavior

Uncertain

1. Seem afraid to try; unsure.
2. Hesitant; restrained.
3. Appear embarrassed.
4. Frequent display of nervous habits, nail-biting, etc.
5. Appear shy and timid.
6. Hesitant and/or stammering in speech.

Confident

1. Seem anxious to try new problems or activities.
2. Undisturbed by mistakes.
3. Volunteer to recite.
4. Enter freely into activities.
5. Appear relaxed.
6. Speak with assurance.

4. Dependent-Initiating Pupil Behavior

Dependent	Initiating
1. Rely on teacher for explicit directions.	1. Volunteer ideas and suggestions
2. Show little ability to work things out for selves.	2. Showed resourcefulness.
3. Unable to proceed when initiative called for.	3. Take lead willingly.
4. Appear reluctant to take lead or to accept responsibility.	4. Assume responsibilities without evasion.

Teacher Behaviors

5. Partial-Fair Teacher Behavior

Partial	Fair
1. Repeatedly slighted a pupil.	1. Treated all pupils approximately equally.
2. Corrected or criticized certain pupils	2. In case of controversy pupil allowed to explain his side.
3. Repeatedly gave a pupil special advantages.	3. Distributed attention to many pupils.
4. Gave most attention to one or a few pupils.	4. Rotated leadership impartially.
5. Showed prejudice (favorable or un-favorable) towards some social, racial, or religious groups.	5. Based criticism or praise on factual evidence, not hearsay.
6. Expressed suspicion of motives of a pupil.	

6. Autocratic-Democratic Teacher Behavior

Autocratic	Democratic
1. Tells pupils each step to take.	1. Guided pupils without being mandatory.
2. Intolerant of pupils' ideas.	2. Exchanged ideas with pupils.
3. Mandatory in giving directions; orders to be obeyed at once.	3. Encouraged (asked for) pupil opinion
4. Interrupted pupils although their discussion was relevant.	4. Encouraged pupils to make own decisions.
5. Always directed rather than participated.	5. Entered into activities without domination.

7. Aloof-Responsive Teacher Behavior

Aloof	Responsive
1. Stiff and formal in relations with pupils.	1. Approachable to all pupils.
2. Apart; removed from class activity.	2. Participates in class activity.
3. Condescending to pupils.	3. Responded to reasonable requests and/or questions.
4. Routine and subject matter only concern; pupil as persons ignored.	4. Speaks to pupils as equals.
5. Referred to pupil as "this child" or "that child."	5. Commends effort.
	6. Gives encouragement.
	7. Recognized individual differences.

8. Restricted-Understanding Teacher Behavior

Restricted	Understanding
1. Recognized only academic accomplishments of pupils, no concern for personal problems.	1. Showed awareness of a pupil's personal emotional problems and needs.
2. Completely unsympathetic with a pupil's failure to a task.	2. Was tolerant of error on part of pupil.
3. Called attention only to very good or very poor work.	3. Patient with a pupil beyond ordinary limits of patience.
4. Was impatient with a pupil.	4. Showed what appeared to be sincere sympathy with a pupils' viewpoint.

9. Harsh-Kindly Teacher Behavior

Harsh

1. Hypercritical; faultfinding.
2. Cross; curt.
3. Depreciated pupil's efforts; was sarcastic.
4. Scolds a great deal.
5. Lost temper.
6. Used threats.
7. Permitted pupils to laugh at mistakes of others.

Kindly

1. Goes out of way to be pleasant and/or to help pupils; friendly.
2. Give a pupil a deserved compliment.
3. Found good things in pupils to call attention to.
4. Seemed to show sincere concern for a pupil's personal problem.
5. Showed affection without being demonstrative.
6. Disengaged self from a pupil without bluntness.

10. Dull-Stimulating Teacher Behavior

Dull

1. Uninteresting, monotonous explanations.
2. Assignments provide little or no motivation.
3. Fails to provide challenge.
4. Lack of animation.
5. Failed to capitalize on pupil interests.
6. Pedantic, boring.
7. Lacks enthusiasm; bored acting.

Stimulating

1. Highly interesting presentation; gets and holds attention without being flashy.
2. Clever and witty, though not smart-alecky or wise-cracking.
3. Enthusiastic; animated.
4. Assignments challenging.
5. Took advantage of pupil interests.
6. Brought lesson successfully to a climax.
7. Seemed to provoke thinking.

11. Stereotyped-Original Teacher Behavior

Stereotyped

1. Used routine procedures without variation.
2. Would not depart from procedure to take advantage of a relevant question or situation.
3. Presentation seemed unimaginative.
4. Not resourceful in answering questions or providing explanation.

Original

1. Used what seemed to be original and relatively unique devices to aid instruction.
2. Tried new materials or methods.
3. Seemed imaginative and able to develop presentation around a question or situation.
4. Resourceful in answering question; had many pertinent illustrations available.

12. Apathetic-Alert Teacher Behavior

Apathetic

1. Seemed listless; lanquid; lacked enthusiasm.
2. Seemed bored by pupils.
3. Passive in response to pupils.
4. Seemed preoccupied.
5. Attention seemed to wander.
6. Sat in chair most of time; took no active part in class activities.

Alert

1. Appeared buoyant; wid-awake; enthusiastic about activity of the moment.
2. Kept constructively busy.
3. Gave attention to, and seemed interested in, what was going on in class.
4. Prompt to "pick up" class when pupils' attention showed signs of lagging.

13. Unimpressive-Attractive Teacher Behavior

Unimpressive

1. Untidy or sloppily dressed.
2. Inappropriately dressed.
3. Drab, colorless.
4. Posture and bearing unattractive.
5. Possessed distracting personal habits.
6. Mumbled; inaudible speech; limited expression; disagreeable voice tone; poor inflection.

Attractive

1. Clean and neat.
2. Well-groomed; dress showed good taste.
3. Posture and bearing attractive.
4. Free from distracting personal habits.
5. Plainly audible speech; good expression; agreeable voice tone; good inflection.

14. Evading-Responsible Teacher Behavior

Evading

1. Avoided responsibility; disinclined to make decisions.
2. "Passed the buck" to class, to other teachers, etc.
3. Left learning to pupil, failing to give adequate help.
4. Let a difficult situation get out of control.
5. Assignments and directions indefinite.
6. No insistance on either individual or group standards.
7. Inattentive with pupils.
8. Cursory.

Responsible

1. Assumed responsibility; makes decisions as required.
2. Conscientious.
3. Punctual.
4. Painstaking; careful.
5. Suggested aids to learning.
6. Controlled a difficult situation.
7. Gave definite directions.
8. Called attention to standards of quality.
9. Attentive to class.
10. Thorough.

15. Erratic-Steady Teacher Behavior

Erratic

1. Impulsive; uncontrolled; temperamental; unsteady.
2. Course of action easily swayed by circumstances of the moment.
3. Inconsistent.

Steady

1. Calm; controlled.
2. Maintained progress toward objective.
3. Stable, consistent, predictable.

16. Excitable-Poised Teacher Behavior

Excitable

1. Easily disturbed and upset; flustered by classroom situations.
2. Hurried in class activities; spoke rapidly using many words and gestures.
3. Was "jumpy"; nervous.

Poised

1. Seemed at ease at all times.
2. Unruffled by situation that developed in classroom; dignified without being stiff or formal.
3. Unhurried in class activities; spoke quietly and slowly.
4. Successfully diverted attention from stress situation in classroom.

17. Uncertain-Confident Teacher Behavior

Uncertain	Confident
1. Seemed unsure of self faltering, hesitant.	1. Seemed sure of self; self-confident in relations with pupils.
2. Appeared timid and shy.	2. Undisturbed and unembarrassed by mistakes and/or criticism.
3. Appeared artificial.	
4. Disturbed and embarrassed by mistakes and/or criticism.	

18. Disorganized-Systematic Teacher Behavior

Disorganized	Systematic
1. No plan for class work.	1. Evidence of a planned though flexible procedure.
2. Unprepared.	2. Well prepared.
3. Objectives not apparent; undecided as to next step.	3. Careful in planning with pupils.
4. Wasted time.	4. Systematic about procedure of class.
5. Explanations not to the point.	5. Had anticipated needs.
6. Easily distracted from matter at hand.	6. Provided reasonable explanations.
	7. Held discussion together; objectives apparent.

19. Inflexible-Adaptable Teacher Behavior

Inflexible	Adaptable
1. Rigid in conforming to routine.	1. Flexible in adapting explanations.
2. Made no attempt to adapt materials to individual pupils.	2. Individualized materials for pupils as required; adapted
3. Appeared incapable of modifying explanation or activities to meet particular classroom situations.	3. Took advantage of pupils' questions to further clarify ideas.
4. Impatient with interruptions and digressions.	4. Met an unusual classroom situation competently.

20. Pessimistic-Optimistic Teacher Behavior

Pessimistic	Optimistic
1. Depressed; unhappy.	1. Cheerful; good-natured.
2. Skeptical.	2. Genial.
3. Called attention to potential "bad."	3. Joked with pupils on occasion.
4. Expressed hopelessness of "education today," the school system, or fellow educators.	4. Emphasized potential "good."
5. Noted mistakes; ignored good points.	5. Looked on bright side; spoke optimistically on the future.
6. Frowned a great deal; had unpleasant facial expression.	6. Called attention to good points; emphasized the positive.

21. Immature-Integrated Teacher Behavior

Immature	Integrated
1. Appeared naive in approach to classroom situations.	1. Maintained class as center of activity; kept self out of spotlight, referred to class's activities, not own.
2. Self-pitying; complaining; demanding.	2. Emotionally well controlled.
3. Boastful; conceited.	

22. Narrow-Broad Teacher Behavior

Narrow	Broad
1. Presentation strongly suggested limited background in subject or material; lack of scholarship.	1. Presentation suggest good background in subject; good scholarship suggested.
2. Did not depart from text.	2. Drew examples and explanations from various sources and related fields.
3. Failed to enrich discussions with illustrations from related areas.	3. Showed evidence of broad cultural background in science, art, literature, history, etc.
4. Showed little evidence of breadth of cultural background in such areas as science, arts, literature, and history.	4. Gave satisfying, complete, and accurate answers to questions.
5. Answers to pupils' questions incomplete or inaccurate.	5. Was constructively critical in Approach to subject matter.
6. Noncritical approach to subject.	

APPENDIX J

ANALYSIS OF TRAINING AND IMMEDIATE POST-TEST DATA

Design	Cell	Ss
1	$A_1B_1C_1D_1$	7
2	$A_2B_1C_1D_1$	5
3	$A_3B_1C_1D_1$	8
4	$A_1B_2C_1D_1$	2
5	$A_2B_2C_1D_1$	5
6	$A_3B_2C_1D_1$	1
7	$A_1B_1C_2D_1$	4
8	$A_2B_1C_2D_1$	3
9	$A_3B_1C_2D_1$	6
10	$A_1B_2C_2D_1$	1
11	$A_2B_2C_2D_1$	2
12	$A_3B_2C_2D_1$	1
13	$A_2B_2C_3D_1$	3
14	$A_3B_2C_3D_1$	5
15	$A_1B_1C_1D_2$	2
16	$A_2B_1C_1D_2$	1
17	$A_3B_1C_1D_2$	2
18	$A_1B_2C_1D_2$	6
19	$A_2B_2C_1D_2$	7
20	$A_3B_2C_1D_2$	8
21	$A_1B_1C_2D_2$	2
22	$A_2B_1C_2D_2$	2
23	$A_3B_1C_2D_2$	2
24	$A_1B_2C_2D_2$	6
25	$A_2B_2C_2D_2$	4
26	$A_3B_2C_2D_2$	3
27	$A_1B_1C_3D_2$	4
28	$A_2B_1C_3D_2$	5
29	$A_3B_1C_3D_2$	4
30	$A_1B_2C_3D_2$	3
31	$A_2B_2C_3D_2$	5
32	$A_3B_2C_3D_2$	4

Table J-1. Number of Ss in the cells of the four-way ANOVA of the training and immediate post-test data.

Source	SS	df	MS	F
A	1122.838	2	561.419	46.733
B	40.039	1	40.039	3.333
C	20.704	2	10.352	.862
D	2.823	1	2.823	.235
AB	1.712	2	.856	.071
AC	252.014	4	63.003	5.265
AD	180.432	2	90.216	7.510
BC	7.464	2	3.732	.311
BD	24.655	1	24.655	2.052
CD	138.102	2	69.051	5.748
ABC	38.456	4	9.614	.800
ABD	4.524	2	2.262	.188
ACD	208.027	3	69.342	5.772
BCD	31.889	1	31.889	2.655
ABCD	7.934	2	3.967	.330
Error	1093.21072	91	12.0133	

Table J-2. Summary of the analysis of variance of the total number of films seen during training.

Source	SS	df	MS	F
A	1364.923	2	682.461	1.397
B	212.927	1	212.927	.434
C	2803.250	2	1402.625	2.856
D	1419.576	1	1419.576	2.893
AB	558.747	2	279.373	.569
AC	795.607	4	198.901	.405
AD	933.533	2	466.766	.951
BC	55.135	2	27.567	.056
BD	802.513	1	802.513	1.635
CD	8647.666	2	4323.833	8.811
ABC	2908.830	4	729.457	1.482
ABD	13.309	2	6.654	.014
ACD	2067.987	3	689.329	.405
BCD	2352.649	1	2352.649	.580
ABCD	1011.050	2	505.525	1.030
Error	44655.74521	91	490.722	

Table J-3. Summary of the analysis of variance of the total number of prompts given during training.

Source	SS	df	MS	F
A	10663.735	2	5331.867	6.457
B	114.581	1	114.581	.139
C	8079.600	2	4039.800	4.892
D	8442.513	1	8442.513	10.224
AB	1997.338	2	998.669	1.209
AC	1545.188	4	386.297	.468
AD	2504.426	2	1252.213	1.516
BC	202.904	2	101.452	.123
BD	1.668	1	1.668	.002
CD	564.409	2	282.204	.342
ABC	1081.619	4	270.404	.327
ABD	778.460	2	389.230	.471
ACD	611.035	3	209.678	.247
BCD	21.598	1	21.598	.026
ABCD	1084.288	2	542.44	.657
Error	75147.75702	91	825.760	

Table J-4. Summary of the analysis of variance of the total amount of instructional time.

Source	SS	df	MS	F
A	22.447	2	11.223	.431
B	7.480	1	7.480	.287
C	45.188	2	22.594	.867
D	794.254	1	794.254	30.494
AB	38.757	2	19.378	.744
AC	49.539	4	12.384	.475
AD	25.751	2	12.875	.494
BC	8.131	2	4.065	.156
BD	59.278	1	59.278	2.276
CD	35.474	2	17.737	.681
ABC	107.593	4	26.898	1.033
ABD	8.988	2	4.494	.173
ACD	25.933	3	8.644	.332
BCD	13.156	1	13.156	.505
ABCD	22.450	2	11.225	.431
Error	2370.231	91	26.046	1.000

Table J-5. Summary of the analysis of variance of the post-test 1st R.

Source	SS	df	MS	F
A	10.475	2	5.237	.653
B	9.861	1	9.861	1.230
C	78.781	2	39.490	4.928
D	439.581	1	439.581	54.727
AB	5.342	2	2.671	.333
AC	21.268	4	5.319	.664
AD	7.248	2	3.624	.452
BC	17.164	2	8.582	1.071
BD	7.597	1	7.597	.948
CD	18.711	2	9.355	1.167
ABC	33.542	4	8.385	1.046
ABD	2.965	2	1.482	.185
ACD	5.200	3	1.733	.216
BCD	2.382	1	2.382	.297
ABCD	.939	2	.469	.059
Error	729.313	91	8.014	

Table J-6. Summary of the analysis of variance of the post-test Dc total.

Source	SS	df	MS	F
A	.869	2	.434	.468
B	.583	1	.583	.628
C	82.826	2	41.413	44.626
D	36.351	1	36.351	39.171
AB	.281	2	.141	.151
AC	.567	4	.141	.152
AD	.296	2	.148	.159
BC	5.513	2	2.756	2.970
BD	.612	1	.612	.659
CD	74.161	2	37.080	39.957
ABC	3.356	4	.839	.904
ABD	.212	2	.106	.114
ACD	2.465	3	.822	.886
BCD	9.277	1	9.277	9.998
ABCD	.737	2	.368	.397
Error	84.43810	91	.928	1.000

Table J-7. Summary of the analysis of variance of the post-test Rf total.

Source	SS	df	MS	F
A	8.426	2	4.213	.321
B	43.777	1	43.777	3.336
C	62.991	2	31.495	2.400
D	150.691	1	150.691	11.484
AB	46.307	2	23.153	1.764
AC	97.902	4	24.478	1.865
AD	51.973	2	25.986	1.980
BC	11.348	2	5.674	.432
BD	.733	1	.733	.056
CD	66.203	2	33.101	2.523
ABC	41.705	4	10.426	.795
ABD	1.232	2	.616	.047
ACD	17.269	3	5.756	.439
BCD	9.037	1	9.037	.689
ABCD	40.278	2	20.139	1.535
Error	1194.11905	91	13.122	1.000

Table J-8. Summary of the analysis of variance of the post-test total incorrect KOS.

Source	SS	df	MS	F
A	21.205	2	10.602	.231
B	59.749	1	59.749	1.302
C	31.842	2	15.921	.347
D	801.298	1	801.298	17.495
AB	18.743	2	9.371	.204
AC	190.917	4	47.729	1.040
AD	97.738	2	48.869	1.065
BC	202.097	2	101.048	2.202
BD	8.107	1	8.107	.177
CD	277.285	2	138.642	3.021
ABC	131.394	4	32.848	.716
ABD	104.021	2	52.010	1.133
ACD	84.315	3	28.105	.612
BCD	60.472	1	60.472	1.318
ABCD	29.086	2	14.543	.317
Error	4176.64048	91	45.897	

Table J-9. Summary of the analysis of variance of the post-test total incorrect Rc.

Treatment	Mean
Successive	22.54
Combination	19.57
Simultaneous	12.59

Table J-10. Mean number of films shown per treatment across schools, terms and pretest levels.

Treatment	Mean	Terms	Mean	Schools	Mean
Successive	123.00	Spring 1966	129.26	U of O	126.53
Combination	113.33	Fall 1966	106.08	OCE	102.23
Simultaneous	103.43	Winter 1967	92.82		

Table J-11. Mean instructional time for treatments, terms and schools respectively.

Treatment	Term		
	Spring 66	Fall 66	Winter 67
Successive	17.941	24.615	20.427
Combination	18.889	20.364	16.385
Simultaneous	13.211	10.832	13.308

Table J-12 Mean number of films shown during training per treatment and term across schools and pretest levels.

Treatment	School	
	U of O	OCE
Successive	19.428	21.565
Combination	16.722	21.708
Simultaneous	13.190	12.043

Table J-13. Mean number of films shown during training per treatment and school across terms and pretest levels.

Term	School	
	U of O	OCE
Spring 66	14.250	19.115
Fall 66	18.352	19.052
Winter 67	17.375	17.400

Table J-14. Mean number of films shown during training per term and school across treatments and pretest levels.

	Treatment	Spring 66	Fall 66	Winter 67
	Successive	14.67	28.00	--
U of O	Combination	14.63	20.00	16.67
	Simultaneous	12.89	10.28	17.80
	Successive	21.63	22.5	20.43
OCE	Combination	23.62	20.67	20.80
	Simultaneous	13.50	11.60	10.50

Table J-15. Mean number of films shown during training per treatment and term and school across pretest levels. (The cell with missing data is due to the fact that the successive treatment was not given to any Ss at U of O during the Winter Quarter.)

Terms	Schools	
	U of O	OCE
Spring 66	69.54	114.85
Fall 66	99.65	105.32
Winter 67	111.13	102.76

Table J-16. Mean number of prompts during training per term and school across treatments and pretest levels.

	Dc Mean	Rf Mean
Spring 66	17.55	3.51
Fall 66	20.19	5.56
Winter 67	21.45	5.09

Table J-17. Mean number of problem cues (Dc) correctly identified and mean number of responses per problem (Rf) on the post-test for each term.

	1st R	Dc	Rf	KOS	Rc
U of O	40.64	16.02	3.23	11.08	8.49
OCE	33.50	21.96	5.49	12.79	11.36

Table J-18. Mean first response score (1st R), mean number of correctly identified problem cues (Dc), mean number of responses per problem (Rf), mean number of incorrect standards (KOS) and mean number of incorrect consequences of response (Rc) on the post-test of each school.

Term	School	
	U of O	OCE
Spring 66	1.97	5.50
Fall 66	5.59	5.26
Winter 67	4.00	5.44

Table J-19. Mean number of responses per problem (Rf) on the post-test per term and school.

Pretest Level		Term		
		Spring 66	Fall 66	Winter 67
U of O	High	2.23	5.15	--
	Low	1.13	4.0	4.0
OCE	High	5.60	5.67	5.46
	Low	5.52	5.46	5.42

Table J-20. Mean number of responses per problem (Rf) on the post-test per pretest level, term and school.

APPENDIX K

ANALYSIS OF RETENTION TEST DATA

Source	df	MS	F
Treatments	2	5.45	1.18
Terms	1	3.69	.80
Interaction	2	2.63	.57
Error	37	4.63	

Table K-1. Summary of the analysis of variance of the first (best) response measure of the retention test.

Source	df	MS	F
Treatments	2	1.332	.105
Terms	1	.0005	.0000
Interaction	2	24.51	1.923
Error	37	12.71	

Table K-2. Summary of the analysis of variance of the second (worst) response of the retention test.

Source	df	MS	F
Treatments	2	7.24	.315
Terms	1	18.791	8.186
Interaction	2	1.368	.596
Error	37	2.295	

Table K-3. Summary of the analysis of variance of the cue discrimination (Dc) of the retention test.

Source	df	MS	F
Treatments	2	6.77	1.160
Terms	1	60.70	10.405
Interaction	2	-2.17	-0.37
Error	37	5.83	

Table K-4. Summary of the analysis of variance of the total incorrect KOS of the retention test.

Source	df	MS	F
Treatments	2	2.952	1.419
Terms	1	.573	.276
Interaction	2	2.541	1.222
Error	37	2.080	

Table K-5. Summary of the analysis of variance of the total Rf of the retention test.

APPENDIX L

ANALYSIS OF CLASSROOM OBSERVATION DATA

Variable	Treatments		
	Successive	Combination	Simultaneous
S and M Time	23.93	31.43	11.5
D Time	59.86	73.86	91.18
S and M Occurrences	5.21	8.50	3.0
D Occurrences	9.64	7.43	6.27
N	14.00	14.00	11.00

Table L-1. Means of the treatment groups for each of the four ANOVAs of the classroom observation variables.

Source	df	MS	F
Treatments	2	1236.25	2.03
Error	36	610.03	

Table L-2. Summary of the analysis of variance of the total S and M time of the classroom observations.

Source	df	MS	F
Treatments	2	3022.42	.347
Error	36	8698.59	

Table L-3. Summary of the analysis of variance of the total D time of the classroom observations.

Source	df	MS	F
Treatments	2	96.53	2.36
Error	36	40.94	

Table L-4. Summary of the analysis of variance of the Total S and M occurrences during the classroom observations

Source	df	MS	F
Treatments	2	37.38	.597
Error	36	62.58	

Table L-5. Summary of the analysis of variance of the total number of D occurrences during the classroom observations.